

## PHD BY PUBLICATION

### Locating presence from storytelling to storyliving in immersive experiences

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# **Locating Presence: from storytelling to storyliving in immersive experiences**

**By**

**Sarah Jones**

**October 2018**



***A thesis submitted in partial fulfilment of the University's  
requirements for the Degree of Doctor of Philosophy***



## **Certificate of Ethical Approval**

Applicant:

Sarah Jones

Project Title:

Locating Presence:  
enhancing experience through storytelling, narrative and immersion

This is to certify that the above named applicant has completed the Coventry University Ethical Approval process and their project has been confirmed and approved as Medium Risk

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**Locating Presence:  
from storytelling to storyliving in immersive experiences**

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Acknowledgments	<b>7</b>
Abstract	<b>9</b>
Introduction and Objectives	<b>10</b>
Part 1: Autobiographical information and portfolio development	
I.    An autobiographical context for the publication of evidence	<b>14</b>
II.   A chronological description tracing the development of the publication of evidence	<b>26</b>
Part 2: Evaluation of outputs	
I.    An evaluative description of the originality of each output	<b>30</b>
II.   An evaluative review of the contribution made by the publication of evidence to the subject or discipline area and any subsequent developments since the work was completed, including published reviews of any of the submitted works and/or evidence of citation frequency of any of the submitted works (where practicable and available)	<b>37</b>
III.  A description, synthesis and evaluation of any links between the outputs and the development of the publication of evidence.	<b>42</b>
Part 3: Critical reflection on development as a research practitioner, research methodology and discussion for further work	
I.    A critical reflection using an appropriate methodology, model or theory on the candidate's development as a research practitioner	<b>54</b>
II.   Full statements on the extent of the contributions of all other persons where some or all of the outputs submitted are collaborative	<b>58</b>
III.  Conclusions and suggestions for future work	<b>60</b>
Part 4: List of references	
I.    Immersive Experience and Communities	<b>64</b>
II.   Figures	<b>65</b>
III.  References	<b>66</b>

## Appendices: The Portfolio of Outputs

1. Immersive Journalism in Practice (Film). 2005 – 2010. National and international broadcast television.	<b>75</b>
2. Changing the Face of News: the Reporter as a Celebrity (2013) Search for the Real: Authenticity and the Construction of Celebrity, ed. Andrew Sepie, Inter-Disciplinary Press, Oxford.	<b>76</b>
3. Disrupting the Narrative: finding the voice within immersive journalism (2017) Journal of Media Practice. 18.3.	<b>89</b>
4. a. Contemplation in ChungKing: an immersive psychogeography journey through the heart of Hong Kong. Screenworks. Vol 7.	<b>106</b>
b. Rapid Passage Through Various Ambiences (Film) (2016). Royal Television Society.	<b>106</b>
5. The Sensorama Revisited: Evaluating the Application of Multi-sensory Input on the Sense of Presence in 360-Degree Immersive Film in Virtual Reality (2017) Jung T., tom Dieck M. (eds.) Augmented Reality and Virtual Reality. Progress in IS. Springer, Cham.	<b>115</b>
6. The Town that Blew Away (2017) Aesthetica Film Festival. Tacoma Film Festival.	<b>129</b>
7. Shameful Conquest (2017) Dublin Web Fest. Carmarthen International Film Festival (award winner).	<b>130</b>

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To Clara-May and Meredith, one message;

“She believed she could so she did.”

This is for you.



## Abstract

This thesis asks: what is the manifestation and meaning of presence within immersive media? It advances the argument that presence is a distinctive quality of immersive media, distinguishing it from traditional film, computer games or television and documentary. The understanding of presence is derived from the notion of suspending all disbelief in the world (Pimental and Texaria 1993) and one where the mediated world is not mediated (Lombard and Ditton 1997).

To apply this understanding to immersive media, the study draws on immersion, as established through saturated reporting within the New Journalism movement. Through this, the concept of immersive storytelling emerges and our understanding of how an audience can immerse themselves in a story through the lens of another. These studies can then be applied to the growing field of immersive media as a result of the development in technologies in virtual reality. This then takes the audience into the frame of the media, rather than observing through the barrier of a screen. Using scholarly traditions rooted in phenomenological thoughts of Heidegger and McLuhan, it seeks to understand what can be learnt from the essence of the technology, as opposed to an interpretation of simply content or output. This informs an approach where technology itself is not at the heart of understanding presence but where it is the technological impact of how emerging forms can impact the nature of presence in storytelling. An interdisciplinary approach to how we achieve a sense of presence is used to assess multisensory work, different narrative forms and agency within virtual environments.

Storytelling, immersion and narrative are explored through research analysis and creative media practice that form a portfolio of published and peer-reviewed outputs. These take the form of immersive journalism and experiential film for virtual reality. The practice is then interrogated in journals and book chapters. Core distinguishing features of presence within immersive media are analysed to identify what is needed to create a lived experience. The impact of multisensory environments, agency within the virtual space, identification and connection with characters, immersion and a non-directed narrative are explored throughout the outputs to enable presence to be realised. This combination of factors point to a new form of narrative, one that can be defined as storyliving.

## Introduction

The underlying research imperative of the thesis is the manifestation and meaning of presence within immersive media. The thesis draws upon and develops scholarly debate within philosophy, media and technology in order to postulate that immersive media is a distinct form of practice that is rooted within presence. Through developing this practice, a non-directed narrative emerges which, I argue, can be defined as storyliving. The concept of presence is one that can lead to contentions, which will be discussed within this thesis, but the working definition here is established by Pimental and Texaria (1993) of suspending all disbelief in the world and believing the illusion that the mediated world is not mediated (Lombard and Ditton 1997).

This thesis is a critical overview that ties together research analysis and creative media practice that form a portfolio of published and peer-reviewed outputs. It begins with my professional work as an immersive journalist through to making experiential cinematic virtual reality. This is a film, captured on a 360-degree camera, that can be viewed within a virtual reality headset. An explorative approach is taken within the creative media practice to be able to understand immersive media, which drives the research. This method and the combination of these outputs create a new body of knowledge within the emerging field of immersive media. Philosophical, media and technological approaches underpin the manifestation and understanding of presence, as one which forms storyliving.

With outputs spanning from 2004, a range of research has been selected for inclusion. The reasons for their selection are explained more fully later but it is useful to understand their selection from the outset. Each output interrogates the idea of presence within immersive media and the narrative form that emerges. This began as professional practice within television journalism through the role of an immersive journalist between 2004-2010. The concepts of presence and immersion have been critically analysed and interrogated to enable a deeper understanding of the story that has derived from the experience of it. With the emergence of immersive journalism (de la Peña 2010; Van der Haak *et al.* 2012; Cruz & Fernandes 2011; Neveu 2014), the portfolio investigates how the infiltration of technology is helping journalism and factual storytelling to develop immersion more deeply (Output 3). Later creative outputs of immersive media further answer the research question of how presence is manifested by bringing together philosophical, media and technological ideas, drawing out answers through practice. The cinematic virtual reality pieces (Outputs 4a, 6

and 7) embody this fusion demonstrating how presence can be achieved through non-directed narrative, defined as storyliving. The table (fig.1) summaries the portfolio outputs.

The following commentary brings together this interdisciplinary and varied methodology portfolio. It bridges the gap between practice and research to develop new modes of inquiry. Collaboration plays a large part of the creative process, drawing on expertise from a wide-range of collaborators to develop new ideas and experimental methods of storytelling. It is a necessary part of the creative process to work in this way and is essential in interdisciplinary research. This process will be discussed further through a presentation of my development as a research-practitioner and the challenges and opportunities that this presents.

### *Aim and objectives*

This critical overview asks: what is the manifestation and meaning of presence within immersive media?

The objectives of the critical overview are:

- To outline the contribution the publications and creative work submitted make to debates about the manifestation and meaning of presence within immersive media.
- To situate the publications as a journey of experimentation to realise presence in experiences, defining a new practice of immersive media.
- To bring together interdisciplinary research to formulate a new understanding of subjective non-directed narratives to enable presence.

The portfolio, as a unitary body of work, centres upon the following research objectives:

- To take an interdisciplinary approach to the production of new knowledge in relation to immersive media through scholarly publications and creative practice.
- To outline critical debates in existing research on the manifestation and meaning of presence within immersive media.
- To develop an experimental interdisciplinary approach to immersive practice that evolves factual storytelling into storyliving

The aim and associated objectives are based upon the following published outputs, listed in fig. 1, which form the portfolio.

This introduction sets out the challenges and opportunities for research-led practice and how interdisciplinarity and the application of existing concepts to an emerging field can help us understand practices better. Combining mixed outputs can often bring about complications. Here, however, it enriches this portfolio by researching not just through the practice application, but also in book chapters theorizing ideas. Critically, underlying each section is a distinct understanding of the concept of presence within immersive media practice and how we can work to enhance this, developing deeper forms of experience that are distinct from media forms that preceded them.

Figure 1: Table of Outputs

NO.	TITLE	YEAR	OUTPUT	OBJECTIVES
1	Immersive Journalism in Practice (Film).	2005 - 2010	National and international broadcast television.	Contextualizing the production of immersive journalism and how immersion is developed from a connection with the audience with their immersion coming from the lens of another.
2	Changing the Face of News: the Reporter as a Celebrity	2013	Changing the Face of News: the Reporter as a Celebrity. Search for the Real: Authenticity and the Construction of Celebrity, ed. Andrew Sepie, Inter-Disciplinary Press, Oxford.	Examining existing research and critical debates within immersive media on the impact of the audience. Identifying external factors that have significant impact on how we understand factual storytelling
3	Disrupting the Narrative: finding the voice within immersive journalism.	2017	Journal of Media Practice. 18.3.	Establishing the impact and evolution from immersive journalist to immersive audience, to understand how perspectives change whilst identifying gaps through outlining critical debates on presence in media practice.
4	a. Contemplation in ChungKing: an immersive psychogeography journey through the heart of Hong Kong. b. Rapid Passage Through Various Ambiences (Film).	2016	a. Screenworks. Vol 7. b. Royal Television Society	Taking an interdisciplinary approach to produce new knowledge in the application of psychogeography and multisensory fields of study.
5	The Sensorama Revisited: Evaluating the Application of Multi-sensory Input on the Sense of Presence in 360-Degree Immersive Film in Virtual Reality.	2017	Jung T., tom Dieck M. (eds) Augmented Reality and Virtual Reality. Progress in IS. Springer, Cham	Evaluating the impact of multisensory inputs on the creation of immersive media and how it can achieve a heightened sense of presence within the virtual environment. To identify other emergent technologies which are having significant impact on how we understand factual storytelling.
6	The Town that Blew Away.	2017	Aesthetica Film Festival. Tacoma Film Festival.	Through experimental practice, exploring emerging techniques and technologies and the impact this has on presence and consequently a narrative genre, defined as storyliving..
7	Shameful Conquest	2017	Dublin Web Fest. Carmarthen International Film Festival (award winner)	Further test and analysis of the idea of where presence originates in immersive media to define a new form of practice.

## Part 1. Autobiographical information and portfolio development

### I. Autobiographical context for the portfolio of evidence

Philosophical debates within media and technology inform this body of work, examining the journey from storytelling to storyliving. This has been reflected within my professional practice in television to scholarly work and media-making in academia. A critical thread throughout these works concerns the notion of *presence*, a term that has multiple contested scholarly origins, which will be discussed.

There are a number of pivotal shifts that have allowed for this publication of evidence to be produced and this autobiographical context examines these and their influence. It is a combination of seven years of peer-reviewed published work, following a decade within television news but it moves the narrative beyond journalistic practice to an emerging medium, which calls for new ways of exploring.

#### *Journalism*

The impact of immersion to challenge perception and understanding of stories first became evident to myself during my practice as a television reporter. In 2002, I began working in television and spent nearly a decade within independent television at regional, national and international levels. Informed by curiosity of presence within media, I developed stories told through immersive journalism, influenced by the work of Truman Capote, Tom Wolfe and Hunter S. Thompson. The New Journalism movement, categorised by work that incorporated literary devices into traditional journalistic stories (Boynton 2005), provided a framework for how I could develop immersive practices. Wolfe's *Manifesto for New Journalism* (1973) positioned journalism in a way that would incorporate literary devices for a deeper understanding of the story. Rather than just reporting facts, the 'feel' of the place and people were deemed necessary to tell the full story. Motivations and thoughts of the subjects were all portrayed in writing where they resembled characters in a novel. Capote's *In Cold Blood* (1965) defined narrative reportage, with Capote arguing that "journalism is the most underestimated, the least explored of literary mediums" (Plimpton 1966). The key characteristics, defined by MacDougall (1972) were stories that were "activist, advocacy, participatory, tell-it-as-you-see-it". These ideas were critiqued by many, stating the preference for a traditional objective reporting stance with commentators, including Grant

(1970) writing that it was a movement of simple passion and advocacy. Despite this, New Journalism pioneered new narrative forms and it is this that became an influence to me within the development of this portfolio of works.

Of particular focus is “saturation reporting” (Stein 1970) and how this could be developed within television news. The distinct factor for Stein, came in the writer’s complete immersion in the subject where they become as much a part of the story as the subject. The term, ‘saturation reporting’, was originally coined by Wolfe (1973) and for Stein, this became a key feature of the movement, rather than the use of literary techniques. The initial example cited was Talese’s profile on boxer Floyd Patterson in *Esquire Magazine* (1962). It presented an account that could only come from being fully immersed as a writer and took the narrative to a place where the inner thoughts of the subjects were revealed. This saturation style of reporting became a key concept for early immersivity in narratives.

“The New Journalism involves a depth of reporting and an attention to the most minute facts and details that most newspapermen, even the most experienced, have never dreamed of.” (Wolfe 1970).

Although financial pressures in newsrooms meant that it was not economical to invest in reporters spending months at a time with subjects for one story, Lebovic (2016) argues that the New Journalism movement shifted reporting style with more aggressive questioning, more thought provoking pieces and a more subjective narrative form. It influenced me to apply the techniques of New Journalism, and distinctly saturation reporting, as a way to develop a more immersive style of television news. Following Stein’s example of the reporter being as much a part of the story as the subject, the collection presented in Output 1 demonstrates the work I produced in exploring the subjects of drug-rape and suicide chatrooms. The stories would not be the same if they were not told in an immersive style. This diverse collection of work broadcast throughout this period, responds to these ideas, reflected through the research questions retrospectively. This method, as discussed throughout this thesis, allows for research and practice that “can be one of inquiry, displacement, and expansive enrichment” (Trinh, quoted in Hohenberger 2007:107).

This was a critical time for television news faced with falling ratings (Cushion 2011). To attempt to reverse the trend, ITV in the UK was building a ‘family of faces’ of reporters, instantly recognizable journalists (Jones 2013). It was thought that a focus on the reporter would create a deeper relationship with the audience, sparking a sense of loyalty that would translate into increased viewing figures (Zelizer 2009). As a result, immersive reporting,

where the reporter was actively involved in the story, was encouraged, though not to the same extent as traditional New Journalism where months would be spent with the subject at one time (Bovee 1999:206). In the first output, I used immersive storytelling to get closer to the story. By building a sense of immersion from the reporter's lens, the audience could understand the narrative from a different perspective. This was evident in correspondence received following the broadcasts, with one standing out in particular, where the viewer explained that they could now get a sense of what it would be like to have a drink spiked. It was not just within exposing truths through immersive techniques, but could be used in more entertainment-style stories. The final broadcast within Output 1, shows myself, as the reporter, auditioning for a role in *Sex and the City*. Through my lens, the audience could understand the process behind the scenes of journalism by looking at a popular story that wouldn't have been made possible, if reported through an objective, detached reporting style.

In 2010, I moved into academia. I wanted to reflect on how this growing movement of immersive storytelling within television news was affecting the nature and experience of stories. Turnock (2000) raised questions around the relationship the audience has with a reporter and the developing influence the reporter has. The conflict of immersive reporting and subjectivity was becoming more profound (Peters 2011; Coward 2013; Wahl-Jorgensen 2013), especially with reporters being considered more like celebrities (Morse 1986; Willis 2009), linked to emerging social platforms. Through Output 2, I interrogated the idea of how our understanding of stories can change through immersion and the subjective nature of a celebritised reporter. This developed ideas that had been established through methodologies that could draw upon the unique perspective acquired through professional practice. Qualitative methods, including interviews with former colleagues and peers succeeded to fill the gap in knowledge. The articulation of the 'immersive journalist' supported a concept of news reporting with a changing notion of what a reporter is.

Through professional practice and scholarly inquiry into immersive storytelling, I was examining how different narrative forms were emerging and where the gaps in literature were, specifically around immersion and saturated reporting. I applied the existing practice of New Journalism into television and subsequently conceptualised new journalistic inquiries. It is story, and more specific storytelling through a subjective lens, that remains the continuous factor. Anthropologists tell us that storytelling is central to human existence (Maggio 2014). As Kearney (2002) argued, "telling stories is as basic to human beings as



eating. More so, in fact, for while food makes us live, stories are what make our lives worth living” (2002:3). How we translate a story through different modes of inquiry is at the heart of my work and at this time there was a further pivotal shift that allowed me to interrogate immersion a lot more closely.

### *Immersion*

As noted, my interest with immersion was fuelled by the New Journalism movement and a curiosity for developing stories with a deeper narrative that could resonate more with an audience. Immersion, though, is a concept that has been of interest to storytellers for centuries. Ryan (2013) posed the question if immersion felt from a book, or a film, was different to immersion within a virtual space. She understood the answer to lie in agency as we become a culture more concerned with interactivity (2013). The importance of agency for immersion within an experience was cited by Brown and Cairns (2003) who defined immersion within games on three levels; engagement, engrossment and total immersion. Some of the most established work on immersion within media practice comes from Murray (1997) emphasising immersion as a “participatory activity”:

“We seed the same feeling from a psychologically immersive experience that we do from a plunge in the ocean or swimming pool: the sensation of being surrounded by a completely other reality, as different as water is from air, that takes over all of our attention, our whole perceptual apparatus.” (1997:98)

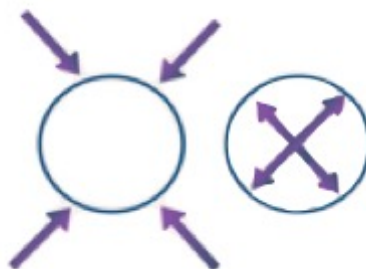
For Murray, it is the complexity of worlds in cyberspace that allow for immersion in new media forms. Noting in 1997, that with every new medium that has been developed, there has been an increasing power of the narrative and how this can transform storytelling. Murray argued it can often lead to hostility and fear as a result to disrupting the cultural norm, but it can open up new ways of understanding. This line of argument has been developed through this portfolio and the research I have undertaken with emerging technologies. Through interrogating the argument of presence and how we begin to lose ourselves in an experience, new narrative forms have started to shape, with a focus, not so much on interactivity but simply on being in an environment.

At this time, a further societal shift with a preoccupation for immersion was emerging. Rose (2012) identified this shift as a response to conventional entertainment not working in the way it used to (2012:4). The argument follows that when entertainment industries lose viewing figures, it generally signals a major shift in audience behaviour. To develop this

argument, Rose identified the cultural shift towards second screen watching and marketing strategies for programmes like *Lost* (ABC 2004 - 2010) that engaged the audience on a number of platforms. He argues that it is both a technological and a generational shift that is driving immersion. This can be understood with the development of immersive media associated within my own work. The platforms that Rose identifies include Internet trails, social media campaigns and offline events, but we can see how they are replicated within immersive media. On a base level, examples have been produced including *Suicide Squad: Special Ops* (Warner Brothers 2016), *Stranger Things* (Netflix 2017) and *Ghost in the Shell VR* (Here Be Dragons 2017). These run as additional viewing experiences to popular films and television shows, evidencing the arguments made by Rose.

This argument has been influential in the outputs 3, 4 and 5. Analysis of the falling ratings in the television news sector led to work on immersion as a new way of reaching audiences, drawing on wider emerging technological platforms to engage and change the narratives from objective reporting to one that is more experiential and a subjective non-directed narrative. Changes in audience behaviour and understanding opened up new forms of immersion and immersive media. These debates will be drawn out further in the third section, when discussing the links between the outputs.

For myself, immersion was not enough. I wanted to develop the work of Rose pointing towards immersion as a cultural shift and the total art form that Ryan identified. Immersion should be more than this and could develop traditional philosophical ideas of technology into a new form of media practice. Immersive reporting meant a different perspective could be offered to the audience and they could feel closer to the story, I wanted to be able to enable an audience to get the same subjective perspective. There was still a barrier of the frame that I wanted to be able to infiltrate so an audience could effectively step inside the story (fig. 2). My research began to question influences from a range of disciplines to formulate new knowledge of gaining presence in media. The third wave of VR began to emerge.



*Fig. 2. The barrier of the screen. The image on the left demonstrates the frame with an audience looking in. The image on the right seeks to show an infiltration of the frame.*

### *The third wave of VR*

Virtual Reality is not a new phenomenon. It can be associated with early ideas around the spherical panorama image and its role in offering a “proper point of view”, were captured in Barker’s 1787 patent. Uricchio (2011) argued that Barker’s work on the panorama was one of the earliest ideas that suggested the immersive opportunities of virtual reality within the still image and that it produces a “second order reality” (Otto, 2007) highlighting that film imagery could offer presence. In 1938, avant-garde playwright Antonin Artaud wrote about “la realite virtuelle”, describing the illusory nature of characters and objects in the theatre. This alternative form of reality was typically non-interactive, non-computer generated and non-immersive, but it introduced the concepts that alternative realities would emerge from. Still today, there is a great body of work demonstrating lessons that can be learnt from theatre to create immersive experiences (Webb 1996; Saltz 2001; Laurel 2013).

With advancement in technology in the sixties, virtual reality was starting to be spoken about and the first ideas were born. In 1968, Ivan Sutherland developed the first head-mounted display (HMD) with the desired outcome that it would make the world look real, sound real, feel real and respond realistically to viewer’s actions (Sutherland 1968). He coined it as the “ultimate display”, which would, “be a room within which the computer can control the existence of matter. A chair displayed in such a room would be good enough to sit in. Handcuffs displayed in such a room would be confining, and a bullet displayed in such a room would be fatal” (Sutherland 1965:508). Although at this stage, it was too heavy to be standalone and had to be tethered to the ceiling, it defined how a HMD could work to define new realities.

The technology remerged with Nintendo’s Virtual Boy in the nineties. Although deemed a failure due to sales and technological limitations (Boyer 2009; Zachara and Zagal 2009), the platform and its ideological goals to create a console that would allow players to immerse themselves in a dual-screen display created a cultural shift for immersion. As argued by Lipartito (2003), it is as much about what we learn from a technological innovation and the impact that this has on societal behaviours that is important.

This period gave rise to leading philosophical thought and these ideas have influenced my later work in both practice and more scholarly traditions. The questions raised by Lanier, Heim and Coyne have helped to articulate the research questions around presence and how we understand this in cinematic VR. The essence of the technology (Heim 1993) and cyberdellic experiences (Barlow 1990) as an art form have been interrogated most evidently

in the latter practice outputs. Within these experiences, how we gain presence and create that idea of lucid dreaming by not being tied to a directed narrative were explored. This approach gives way to storyliving.

The re-emergence and accessibility of VR since 2014 means that it has established itself as a growing medium for storytelling. Through infiltrating the barrier of the screen (see fig 2), I wanted to be able to drive a narrative that would allow the audience to be in the story, rather than observing from the outside. Through the development of 360-degree cameras and virtual reality, I could begin to experiment with stories that would capture this ideal and answer the research questions around presence.

One of the most influential thinkers within immersive journalism has been Nonny de la Peña, who, in 2010, defined the field as the “production of news in a form in which people can gain first-person experiences of the events or situation described in news stories” (2010:291). De la Peña capitalised on the notions of immersion defined by Murray (1997) to isolate the user in an experience to command their full attention. By doing this, and through the first-person experience of a story, de la Peña wanted to “restitute the audience’s emotional involvement in current events” (de la Peña 2010:298). Through a series of experiences, *Hunger in L.A.* (2012), *Use of Force* (2014), and *Kiya* (2015), de la Peña enables the user to become a digital avatar entering a new space, with the aim that a personal experience would challenge the ideas behind the story. For example, *Kiya* (2015) focused on domestic violence using recorded mobile phone conversations made between two women whilst they were waiting for police. During this time, their sister, who was being threatened by police, was shot dead by her partner. There is no active participation from the user, but by creating the digital avatar and images through CGI, the user can move around the environment and explore the unfolding scene.

Immersion, for de la Peña, comes from an ‘embodied digital rhetoric’. Through becoming part of the world, the stories are then “communicated in a uniquely visceral way” (de la Peña 2017:208). For this, she argues that three concepts achieve presence; place illusion, plausibility and virtual body ownership. It is then that immersive journalism presents a powerful experience where presence enforces a new understanding and perspective in the narrative. This develops the work of Slater *et al.* (2010) and will be critically assessed in section 2:3 in discussion of the links between the outputs.

This work has been pioneering and transformative in our understanding of immersive journalism and meant that enabled myself to develop de la Peña’s approach and look at how

immersive journalism could capture ‘on the day’ news stories. Output 3 explores how news organisations have been using the technology and the type of narratives that are emerging. Having a framework, established by de la Peña, meant that I could apply this to news events using 360-degree filming technology, extending the field of knowledge in this area.

In further exploration of the research questions, I was creating experiences that could develop different levels of presence and how narratives could emerge if a story allowed a viewer to step into the frame. The place of my work within the context of this portfolio of outputs has developed the ideas focused on the subjective experience of a non-directed narrative. Virtual body ownership, instrumental in de la Peña’s work, has its limitations and the portfolio of outputs demonstrate it is not an essential requirement for presence to emerge in a storyliving approach. The research questions interrogating this have not been about the presence of a body in an experience but instead around our understanding in experiences. This is evident in the practice elements of work from the films made in *Chungking Mansions* (2016), which look at how the change in perspective could alter understandings and the latter two portfolio outputs where the films locate you in an environment to explore, without being directed. Varying narrative forms were deployed, borrowing techniques from psychogeography and non-directed narrative forms, rather than an emphasis on virtual body ownership.

### *Empathy*

With a range of work being produced within the field, as documented in the portfolio (Output 3), there became a shift in the understanding of the technology. In 2015, Chris Milk, one of the most prominent virtual reality filmmakers, delivered a Ted talk, arguing that VR is an ‘empathy-machine’. Milk, produced *Clouds Over Sidra* (2015), which told the story of a twelve year girl who lost her home in Syria. The film was made to highlight the plight of refugees to decision makers at the United Nations. The campaign that introduced the work, positioned it with the following questions:

“What if policy discussions on refugees didn’t take place inside boardrooms or official chambers, but rather in a forum where refugees themselves could intervene and argue for programmes that made sense to them? What if policymakers could personally interact with displaced populations? Would our policies be different, and better? Would our responses to forced displacement change?”

United Nations Virtual Reality 2017

Deconstructing Milk’s account, immersive journalism makes three promises: the promise of creating empathy; the promise that empathy involves better understanding, and the promise

that better understanding will change the way people act. The latter promises are not new. Journalists have long held the view that certain forms of journalism, especially documentary journalism, should create empathy for those in dire situations and this would lead to better understanding and ultimately affect the way viewers act. The driver then, for immersive journalism, is “that feeling that one has experienced something will make a user care more deeply about it.” (Owen 2016).

Using immersive technology to challenge perspectives and employ an understanding of empathy in different situations was not a new concept pioneered by Milk. Research at Stanford’s Human Interaction Lab studied how switching perspective can help understand different societal groups. In one study to understand the homeless (Herrera *et al.* 2018), researchers found that participants who became homeless in VR, as opposed to ones that were given information about it, had more positive, longer-lasting attitudes towards the homeless. A similar impact was demonstrated in a different study (Aitamurto *et al.* 2018) exploring gender equality in the workplace, which used a technique to split the 360-degree image so each 180-degree angle would represent a different gender. This study showed an increase in the viewers’ feeling of personal responsibility for advancing gender equality in the workplace when they identified themselves with the female perspective.

Other studies have demonstrated the illusion of swapping bodies in VR (Slater *et al.* 2010) whilst *The Machine to be Another* project has explored these concepts further, asking the question, ‘If I were you, would I better understand myself?’. It was natural that the work established in switching perspectives and understanding what it was like to walk in someone else’s shoes would lead to experiences that would create a sense of empathy.

In the previous waves of virtual reality, the technology has remained exclusive to gaming and the fields of computer science and engineering. The emergence of the technology in the third wave has made it more accessible, where the emergence in the sixties and nineties remained almost mystical. Digital media theorist, Wendy Hui Kyong Chun has argued that new technologies are usually ignored when they are new due to lack of understanding (2008). It is only when things are given a frame of reference that we can understand the technology and accept the ideas. It is here that I postulate that empathy has been used to humanise the technology, allowing it to resonate with audiences who would not normally be users or consumers of the technology. From a commercial perspective, it was a bold and clever move to define VR as a tool for empathy. It opened up a field for the technology that was often limited to gaming and training. The New York Times developed their own app for

empathy-driven storytelling, releasing it by sending out 1.2 million cardboard headsets to their subscribers in November 2015. This move, and the humanising of the technology, proved a pivotal shift in the development of immersive media and the interrogation of the research question at the heart of this body of work.

However, despite the humanising of the technology allowing expansion and its application within media industries, it is problematic to argue that VR is an empathy-machine. It is something that has driven one of my recent publications (Jones 2018), considering the limitation of the technology by framing it as an empathy-machine.

Although it can be an invaluable medium to generate reflection and new perspectives, the argument that the experience is of the same value and has the same effect as the contextualised lived experience of the subject is reductive. The argument by Chun, questions that even if you could recreate a perfect sensory match for another's reality, you cannot truly know their experience. As she argues, "if you're walking in someone else's shoes, then you've stolen their shoes" (Chun 2016). The argument is that when drawing on an empathetic response, the other is replaced with the self, so it can only ever be your understanding of what that experience would be like. This is reminiscent of Nagel's 1974 essay, 'What is it like to be a bat?', where it draws on the subjective character of experience. For Nagel, drawing on the experience of a bat only tell us what it is like for our self to be a bat, not what it is like for a bat to be bat. As he argues, "if I try to imagine this, I am restricted to the resources of my own mind, and those resources are inadequate to the task" (1974:439). To summarise, although the shift to using the technology to open up new perspectives has enabled the medium to grow and offer a way to humanize the technology, the notions that it is driven by empathy remain problematic.

#### *A new philosophy of immersive media*

The final influence within this portfolio of works stems from philosophical traditions around experience and technology. It is important to note in the autobiographical context, that my early studies at University were within philosophy, so the questions around the value of experience and consciousness are evident within this body of work. The latter outputs within practice stem from the research question concerning presence, but are influenced by the phenomenological reasoning of Heidegger and Merleau-Ponty. The phenomenological assumptions require that one rejects absolutely objectivity (Bitbol 2012; Moran 2013; Nagel 1986), recognising that the analysis of subjective behaviour can lead to knowledge. To this end, phenomenology is orientated directly towards discovery (Orbe 2009).

The technological influence from a phenomenological perspective of experience and discovery has helped guide the thinking behind the work and allowed for discussion on what are the crucial parameters of immersive media. It is not new to use phenomenology to understand the impact of technology on our experience and consciousness (Heidegger 1977; Borgmann 2009; Dreyfus 1992). Heidegger (1972) began to explore humanity's relationship with technology as something that is experienced when it is able to freely develop to discover a true sense of meaning, with Merleau-Ponty (2011) analysing where our philosophy is developed by the experience of bringing truth into being. This approach seeks to articulate the essence of technology, which has helped to gain much deeper perspectives of immersive media as the technology advances and develops. Crucial to his thesis, Heidegger explains that the essence of technology is nothing technological. Both Heidegger (1977) and Dreyfus (1992) argued for a return to the beginning, before technological advances. The technology does not make sense in itself so we need to understand what the technology is revealing to us, or disclosing to us, to fully understand its meaning and place in society (Heidegger 1977:2). As Heidegger describes:

“Whoever builds a house or a ship or forges a sacrificial chalice reveals what is to be brought forth, according to the perspectives of the four modes of occasioning. This revealing gathers together in advance the aspect and the matter of ship or house, with a view to the finished thing envisioned as completed, and from this gathering determines the manner of its construction. Thus what is decisive in techne does not lie at all in making and manipulating nor in the using of means, but rather in the aforementioned revealing. It is as revealing, and not as manufacturing, that techne is a bringing-forth”

In this portfolio of works, these ideas are applied to the practice of storytelling, and how new forms of technology permits emerging story forms, along with new patterns of experiencing the world and the stories it has to tell. A simple example may be found in a virtual reality experience by Marshmallow Laser Feast, *Treehugger* (2016). The viewer steps inside the trunk of a tree to experience its anatomy from within, which makes manifest a completely different way of viewing the object of tree. The experience from within is no less real or truthful from the view we have when looking upon a tree and it may add an additional layer of reality to our comprehension of what a tree entails.

This example helps to realise more recent phenomenological debates within the field, concerning the meaning of virtual reality and how we think about our relationship to it. From the idea of cyberspace acting as a virtual world to understand cultures, illuminating “the



magical reality of all human narratives” (Pesce 1997:12) to questioning the provocation itself, asking ‘why do we feel the need to create something when we seem to have so little understanding of why the natural exists?’ (Gigliotti 1997:40). Chalmers has furthered the debate about the reality of virtual reality, arguing that it is in fact a form of reality itself (2017). Attributing the value to life in virtual world as almost equivalent to that in non-virtual worlds, this line of argument creates a foundation in which we can place value on immersive media to create genuine experiences that hold value and create knowledge. The fact that phenomenology itself allows for flexibility in method with the understanding that it is an “open and ever-renewed experience having different results” (Farina 2014:50) has been paramount to my journey as a research practitioner.

This analysis of the autobiographical context of the work demonstrates the pivotal shifts that provide context for the portfolio of work. Beginning with the New Journalism movement, the application of saturation reporting within mainstream television news and the subsequent academic reflection of this, allowed for immersive journalism to evolve. Emerging technology within VR and the early work around immersion in media theory of Murray and within virtual reality in journalism with de la Peña, provided frameworks for understanding how cinematic VR could guide an audience through gaining presence in an environment. Concerns around empathy and the humanising of the technology framed the work within narratives and typology of experiences. The final shift draws on existing philosophical thought of technology and consciousness. This application within practice, in the experiences evidenced in this portfolio of works, allow the research question to be realised. The research at this point follows a McLuhan approach where it shifts towards exploration over explanation (Levinson 2004:4). It is here, that we find presence, through multi-sensory stimuli and the non-directed nature of an experience, which enables a deeper sense of agency within the virtual environment.

## II. Chronological description tracing the development of the portfolio of evidence

The portfolio of work consists of seven selected outputs produced between 2004 and 2017. The chronological description traces the development of the outputs to answer the research objectives concerning presence in immersive media.

### Output 1: Immersive Journalism in Practice (Film).

The first output conceptualises immersive journalism through a collection of work produced in professional practice. It applies a framework of New Journalism (Wolfe and Johnson 1973) to interrogate the concept of saturation reporting and the correlation that this style has in developing the audience's understanding of the story and their relationship with the storyteller (Turnock 2000). This series of stories were broadcast nationally between 2004 and 2010. The single output brings together a range of stories to reflect the diversity and range of styles that can be applied to immersive media.

### Output 2: Changing the Face of News: the Reporter as a Celebrity

The work in the second output addresses the ramifications of immersive journalism. The book chapter, published in 2014, uses frameworks of New Journalism and Gonzo reporting, arguing that a more subjective account of a story, where the storyteller or journalist is involved, engages the audience more fully. This subsequently leads to deeper connections and empathy.

These two outputs provide a framework for understanding what we mean by immersive storytelling, as a form of narrative that aims to evoke a stronger reaction from an audience than objective traditional journalism. It demonstrates that immersive journalism, where an audience is invited into a world, becomes an experience. It draws on Burch's (1979) filmic presence by locating the audience in the story, developing relationships with the characters. Although not an interactive experience, the relationship building leads to a more active experience, which is subsequently drawn on in the other outputs. Immersive journalism brings together immersion and interactivity within news to maintain standards and control whilst allowing space for emerging technologies to find their own sense of meaning (Hardee and McMahan 2017).

### Output 3: Disrupting the Narrative: finding the voice within immersive journalism.

The exploration of presence through immersion and narrative is tested and analysed in the remaining outputs. The journal article, 'Disrupting the Narrative', produces very early data on current forms of immersive storytelling and analyses how stories are being told to create that sense of presence. A content analysis of media produces a new framework for narrative forms within immersive media and tests through qualitative data, which enables more of a sense of immersion.

### Output 4 a: Contemplation in ChungKing: an immersive psychogeography journey through the heart of Hong Kong.

After establishing the concept and field of study, the following outputs all work to increase presence within practice and analysis of this within published works. Questioning whether presence can be achieved through locating the audience within the environment, a framework of psychogeography is used to understand immersion from an experiential narrative that is directed and recorded in situ. The location as a character and the importance of place and space, calls for analysis of psychogeography to understand how the environment can lead to a sense of presence. This output, published in Screenworks (February 2017), comprises a film experience and a research statement. The experience addresses research questions around emerging forms of production, the construction of narratives to achieve presence and how experiential film can create a more immersive experience of place. Debord (1958) recognises it as "the study of the precise laws and specific effects of the geographical environment, consciously organized or not, on the emotions and behaviour of individuals" (1955:23). The concept of the derive requires the "letting go" (Debord 1958) of ideas to allow for the exploration of new environments. Applying this within virtual environments can achieve presence.

### Output 4 b: Rapid Passage Through Various Ambiences (Film).

A further exploration of this work comes in the sub-output. This is a different version of the film and includes the multisensory experience, which was showed at the Royal Television Society (November 2016).

### Output 5: The Sensorama Revisited: Evaluating the Application of Multi-sensory Input on the Sense of Presence in 360-Degree Immersive Film in Virtual Reality.

The examination of the introduction of multisensory modes offers a new way of increasing presence in 360-degree film. It can be positioned alongside early multisensory VR work by The Feelies (*Munduruku* 2017). The book chapter entitled '*The Sensorama Revisited*' and the film '*Rapid Passage Through Various Ambiences*', take immersion theory of gaming psychology and multisensory research that has been developed in CGI environments and virtual reality and applies these to 360-degree film. The combination of data drawn from this research establishes a new practice of film-making that is immersive and experiential where presence can be enhanced through the introduction of different sensory modes.

#### Output 6: The Town that Blew Away and Output 7: Shameful Conquest.

The final two outputs are applied experiences of the research trajectory. The 360-degree films, *The Town that Blew Away* (2017) and *Shameful Conquest* (2017) have been critically acclaimed at national and international film festivals for establishing a new field of practice, namely immersive experiential film. The research approach is informed by Ryan's concept of 'total art' in virtual reality (2015) applying interactivity, immersion and narrativity into the film genre. They are designed to produce a non-directed narrative, allowing for the participant to explore what this uniquely represents to them, building towards storyliving. It extends the work of the spacemaker (Walser 1992) as a way of knowing, rather than the media just being a form of expression. Walser's concern with immersive virtual reality is embedded in the idea of the inseparable mind and body with embodiment being central to the notion of cyberspace. By taking this approach, the concept of immersive experiential film, which relies on multisensory experience to reach levels of presence, allows people to comprehend new realities. It is argued that this leads to a greater understanding and connections to the subject due to the experience feeling 'real'.

The concept of presence is one that has largely been attributed to virtual environments as one where the suspension of disbelief is achieved (Pimental and Texaria 1992), however other frameworks acknowledge that is not just 'being' but also having agency within a virtual environment (Slater, Usoh, & Steed 1994; De La Peña 2010). Within 360-degree film, the current limitations of the technology restrict being active agents embodied in the virtual world. Any forced interactions appear through eye gazing or menu choices which can break the sense of presence (Madigan 2015) and so theories formulating within film help to understand presence through non-narrative experiences. Immersion theory of gaming psychology, where the user feels presence in a non-physical world through images, sounds and other stimuli, is applied in film, taking it beyond its foundation in video games.

Throughout the practice outputs, the idea of presence is explored, using the diegetic effect where the experience is at the heart of the film (Burch 1979). Through this idea, “viewers experience the fictional events as if they were happening all around them” (Bordwell, Staiger, & Thompson 1985:37). In the first output, which is the collection of immersive reporting from the storyteller perspective, the connection between viewer and reporter is analysed. The internalisation of the story is extended to the audience but through the storyteller’s lens. In the 360-degree film outputs, the positioning of the viewer is present in the environment, allowing for a more immersive experience.

## Part 2. Evaluation of Outputs

### I. An evaluative description of the originality of each output

As with any form of research, originality is key to evaluating the contribution of knowledge to the field of study or practice. This is demonstrated through the peer-review process.

Presented is a disparate set of distinct outputs and although interlinked, each one has been peer-reviewed and published thus contributing knowledge to the field.

#### Output 1: Immersive Journalism in Practice (Film).

The nature of the news industry means that originality is essential within these outputs or they would not be considered news or broadcast under this category (Harcup and O'Neill 2001). The thematic context for this collection is immersive journalism, which distinguishes this from the thousands of news reports produced by myself within practice. Within this period (2004 – 2010), reporter involvement was emerging (see Output 2), as discussed in section 1. This concept allowed for immersive journalism to emerge and is now explored, evidencing the range and diversity of what this can mean. The series of reports focused on drug rape won two national news awards, an accolade distinguished for its originality. It was also selected for broadcast on network news. The latter reports in this collection show the contrasting style and explore immersive journalism through a light entertainment approach. What is distinct in this work is the style of reportage and the language that is used.

Traditional television reporting relies on the objective voice, where language within this work is all in the first person. Instead in this selection of work, language is more subjective. For example, in the final pieces within Output 1, I, as the reporter, have a direct conversation with the viewer. Looking directly into the lens in a technique to build a relationship with the audience (fig. 3), the language specifically used draws out a new kind of relationship between the viewer and myself.

“That was the casting director from the Sex and the City movie and they want me. I need to dress in upscale Autumn clothes, look very well put together and of course, bring my designer bags. But what can a girl wear to look this fabulous? I need to go to Fifth Avenue”

Some materials have been removed from this thesis due to Third Party Copyright. Pages where material has been removed are clearly marked in the electronic version. The unabridged version of the thesis can be viewed at the Lanchester Library, Coventry University

Figure 3. The reporter talking directly to the audience to build a personalised relationship.

This is a distinguishing factor and develops it into a new genre of television news reporting, bringing literary devices into the medium, as Capote drew upon in *In Cold Blood* (1965).

Output 2: Jones, S. (2014) 'Changing the Face of News: the Reporter as a Celebrity'. In Sepie A. (ed.) *Search for the Real: Authenticity and the Construction of Celebrity*. Inter-Disciplinary Press: Oxford.

Through understanding the practical Output 1, a conceptualisation of immersive journalism emerges within Output 2. This book chapter was developed from a symposium in Prague (March 2012) and was selected for publication within this collection on the construction of celebrity. The chapter provides a significant advance to the understanding and knowledge of the reporter as a celebrity previously only constructed in the work of Morse (2004) and Willis (2009). The work develops existing theoretical frameworks of immersive journalism from the New Journalism movement and situates them, as a new form of expression, in a growing celebrity culture framework. It presents a new argument that bridges the gap between celebrity and immersive reporting, understanding how the two are linked. This work adds an important contribution to the field, using interviews acquired through my professional networks.

The originality of the output and development of the role of the television reporter in a field that has lacked academic research meant that the chapter enhanced the understanding of the role. From the presentation and discussion at the international symposium, the research

was subsequently developed, drawing on other ideas to add significance to the field. This increased the depth of scholarship, drawing on expertise from cultural studies in an interdisciplinary research network. The originality of the work was recognised internationally through the publication and has advanced thinking in the area of celebrity culture in non-traditional roles.

Limited academic research focused on the work of Morse (1986) and Willis (2009). The work of Morse was limited temporally and produced an understanding of the American reporter. Willis' approach was more relevant and concerned the mind of the journalist and the impact of celebrity made. My approach drew on this work but analysed it from a professional point of view, analysing interviews from the field in a time where celebrity is heavily influenced by an increase in social media and the accessibility of the television reporter to its audience (Marshall 2010; Marwick 2013). Through a combination of these methods, this output is original in terms of its findings and advancement of the field.

Output 3: Jones S. (2017) 'Disrupting the Narrative: finding the voice within immersive journalism'. *Journal of Media Practice*. 18.3.

This is one of the first peer-reviewed journal articles to address immersive journalism, as a form of virtual reality and so is world-leading in terms of originality, significance and rigour, as determined by the reviewers and citations to be discussed in the next section. Prior to this publication, only one paper had been presented on immersive journalism within VR (De La Peña *et al.* 2010), focusing on computer-generated virtual worlds. The significance of this output is identifying the area of practice and providing a framework for understanding how virtual reality is being used by news organisations. The focus is not on methodological innovation, instead it is a clear intellectual advance that makes an important contribution to the field of practice. By developing a content analysis of current immersive journalism, a new model could be conceptualised and developed for future research.

Although the field has moved on considerably, with technology developing and growing at a fast pace, the research provides substantive insights on style, content and a framework for production and understanding. It is of great significance in terms of industry understanding and the academic field. Citations evidence that the results have been instrumental in developing new thinking and practices, as the field continues to grow.

Through the development of Outputs 1 and 2, the practice developing from a journalistic background offers considerable insight and engagement with other relevant work. This begins to draw on ideas of empathy. The contribution of this output, which will be evaluated in the next section, demonstrates the importance and originality of this journal.



#### Output 4:

- a. Jones, S and Dawkins, S. (2017) 'Contemplation in ChungKing: an immersive psychogeography journey through the heart of Hong Kong'. *Screenworks*.
- b. Rapid Passage Through Various Ambiences (Film). Royal Television Society November 2016.

These are distinct, individually peer-reviewed outputs, but they form one submission in this portfolio. The first was published within Screenworks (2017), combining the film and a research statement. The film was developed to answer questions concerning how new technologies and new modes of production are changing relationships between viewer and text. What is distinctive about this output is the focus on expanding the field of research in an interesting way, offering new interpretations and imaginative scope of the field. By developing existing bodies of work, particularly through the psychogeography framework, new formulations of the technology are explored. It looks at the *dérive* (Debord 1958) and the situationist approach taking the concept of an unplanned journey through an urban landscape. A clear methodological innovation is in the application of psychogeography to cinematic VR. The usual mode for psychogeography explorations lies within the protagonist sharing their journey and revealing the attractions and encounters within the environment (Chalupsky 2014). Through applying this to cinematic VR, different forms of expression emerge. In this case, psychogeography provides an understanding that the audience can navigate the world in front of them.

Other practices within cinematic VR are emerging which explore places. Due to the accessibility of the technology, more amateur video is emerging where places and spaces are captured. These usually focus within a tourist framework, showing and guiding the viewer to traditional landmarks and the environment. What is distinct with this output is the realisation of the research questions that explore how presence manifests itself within immersive film and how this can be created. By creating immersive media in a psychogeography form, attention to the experience of being in the environment is unique. Through post-production, this can be enhanced giving a more convincing sense of being in the environment (Mateer 2017). The engagement with this practice demonstrates a significant level of academic rigour. This enhances the practice of virtual reality, as acknowledged in the peer reviews, stating that the right questions are being asked in terms of production techniques, whilst challenging best practices for further exploration.

The second part of this submission reproduces the film developing further conceptual ideas within the practice. Drawing on research that looks at the impact of presence through adding various sensory stimuli, a new version of the film took these ideas and developed understanding. The originality of this work is distinguished by the creative advance that this made, making an important contribution to the field of emerging technology. No other academic research has advanced knowledge within the artistic field, as it is all situated within memory and health research. Through developing my own multisensory work as a media form, I have been able to interrogate the impact that added sensory input has on presence so that the arguments have intellectual coherence and academic rigour. My research-led practice in this area was shown as an experience at the Royal Television Society in November 2016. The significance of this has wide implications for thinking and understanding practice. A number of other sensory virtual experiences have subsequently been developed, enhancing the field. In 2017, a partnership between The Feelies, Alchemy VR and Greenpeace, produced a multisensory experience entitled, *Munduruku: The Fight to Defend the Heart of the Amazon*. Additional sensory inputs were developed including scents, vibrations, touch and temperature.

Output 5: Jones S., Dawkins S. (2017). 'The Sensorama Revisited: Evaluating the Application of Multi-sensory Input on the Sense of Presence in 360-Degree Immersive Film in Virtual Reality'. In: Jung T., tom Dieck M. (eds.) *Augmented Reality and Virtual Reality*. Springer: Cham.

This output applies existing research within health and memory studies to artistic practice. As a reflection on the Output 4b, data has been analysed presenting an original contribution to the field. Through a methodology that combines a study of existing research and the production of a film, the understanding and impact an audience felt from the increased presence with added sensory stimuli was captured. In a creative advance of understanding, existing conceptual models are developed and a new argument is presented in the hierarchical impact of stimuli. The data was captured during screenings of the film and this in itself enhanced practice by demonstrating the research in practice. The chapter was selected, by peer review, following on from the AR and VR international conference at Manchester Metropolitan University (February 2017). The research was refined and developed to form this chapter in the edited collection.

Output 6: Jones, S. (2017) *The Town that Blew Away*. (Film). Aesthetica Film Festival. Tacoma Film Festival.

Intrigued by the 'spacemaker' concepts formulated by Walser (1981), I looked to apply these within cinematic practice. The conceptual model of the 'spacemaker' explores how different realities can emerge in a virtual world, rather than a set narrative within a fixed-media approach. This is a concept that arose from early studies in VR and within computer-generated virtual worlds. It makes an original creative advance to understanding how space can be captured in a new way, where the narrative evolves from the experience. This allows for great imaginative scope, taking a concept from an existing field and applying it to an emerging media and analysing the impact. Through a screen-based enquiry model (Kerrigan 2015), the concepts have been tested and developed to determine the best way to create a space for experience to emerge.

The majority of cinematic virtual reality being produced uses a directed narrative or attention cues to direct where the story is evolving (Dooley 2017). A distinct feature of my work is the freedom for personalised narratives to emerge, not directed. This is an area which will be developed in section 5, noting the links between the outputs. This brings about considerable challenges in ensuring that a narrative, albeit a non-directed one, is still formed. It also is essential for the director of the experience to relinquish their control of how the story is received. It is the experience itself that drives the narrative. This marks my work as distinct and original to other works being made, which are much more directed. Interactive documentaries allow for more freedom in the experience, but can still be fairly directed (Gaudenzi 2013; Galloway *et al.* 2007; Aston and Gaudenzi 2012). What emerges is a new form of practice and a way of interpreting the media. Analysis of the development and the application of existing concepts from other fields of practice demonstrates academic rigour.

Output 7: Jones, S. and Dawkins, S. (2017) *Shameful Conquest*. (Film) Dublin Web Fest, Carmarthen Film Festival.

In this final output, the concept of immersive experiential film is realised. Having taken an iterative approach of testing and reformulating, the work is realised to ensure presence within the practice. The originality and creative advance of this output is realised in the selection at international festivals, including winning Best Experimental in the BAFTA-qualifying Carmarthen Film Festival and Dublin Web Fest. The new arguments that are realised point to a concept of presence, achieved through a reflective experience that is unique to the viewer. Different forms of media practice are brought into this final submission, assembling spoken word, immersive sound and original composition into a new form of expression. The consequence of this is an enhanced form of new practice, developing the

field, which has been recognised by invitations to speak about this process and concept at international events, including OreDev in Malmo (November 2017).

By drawing on conceptual models and ideas from across subjects, there is a significant level of intellectual coherence that follows the set research trajectory. This is an original film as it brings together a number of art forms from literature, music, performance, theatre and computer science, all to form one new emerging practice. It develops from Output 6 to realise the experience that drives our understanding, marking the media as distinct.

Interpreting these ideas within media practice contributes to the approach of storyliving, where we realise presence.

## II. Evaluative review of the contribution made by the publication of evidence to the discipline area

In claiming that the publication of evidence has made a worthwhile contribution to knowledge and understanding in the field, it is necessary to establish that each individual contribution has a sense of longevity, has been a source for further discussion and practice and has developed academic and creative thought and practice. The outputs work together to ensure the research objectives met and this is demonstrated within this section. There is an interdisciplinary approach to the production of knowledge and the contribution of each output is made through both scholarly publications and creative practice. The analysis within the outputs outline the critical debates in existing literature and the contribution of the experimental creative practice demonstrates how emerging forms are impacting factual storytelling, offering a new narrative form of storyliving.

In terms of journalistic contribution, the submission of Output 1 is difficult to argue for the longevity of the work. News is timely and does not work with repeat screenings or viewings, in the same way as the latter outputs within practice do. Despite this, the contribution of the work is substantial. The audience reach of the work runs into the millions. Some of the collection was a smaller regional audience but was broadcast to millions on the ITV network news programmes. The latter work, when I was a correspondent at a breakfast television programme, had an audience reach in the region of six million viewers. The significance of this lies in terms of accessibility and impact. More significant contribution to the field is also evident within this work. In 2005, my work as an immersive journalist won two national news awards. This indicated a sense of longevity with the work so that other journalists could engage fully with the ideas and develop their own immersive reporting styles. The award for Reporter Involvement, won initially by myself in 2005, continues to exist with other journalists following this trend.

The remaining practice media within this submission all have considerable impact in terms of contribution to the field. External validation of the work comes from the selection of the work to international film festivals and curation at exhibitions. These are largely public-facing so can have wide-reaching impact. More importantly, the selection at leading industry events means that it informs and potentially transforms the field, contributing and informing other production.

In November 2015, I was asked to bring a multi-sensory film to the Royal Television Society, where two hundred industry professionals and members of the Society attended. Many watched the film and gave feedback<sup>1</sup>, discussing how using multisensory work in this form could inform their own practice. I was later asked to speak about this work on a number of Digital Jam podcasts and industry panels.

*The Town that Blew Away*, Output 6, was selected for the BAFTA-qualifying Aesthetica film festival. This was shown twice within the festival in York, UK. Aesthetica is one of the leading artistic film festivals in the world with its reputation confirmed through its BAFTA qualifying status. The film was selected within the 'Artists' Films' category. The film has also been shown at two US festivals, Orcas Islands and Tacoma. The rise in VR being shown at film festivals has increased in the past two years, often as the entry point for many audience members but the importance also is linked to making the creative practice visible.

*Shameful Conquest* (Output 7) was shortlisted and shown at Dublin WebFest. It has subsequently been selected as a winner within the BAFTA-qualifying Carmarthen International Film Festival.

I take an iterative approach to research practice and a form of Screen Production Enquiry, where I draw on peer-reviews of the work from those leading practice. Through an evaluation of the work in this way, I can refine the production and develop the response to the questions that I am posing as part of the work. This acts as a peer-review of the research, ensuring the practice has sufficient academic rigour, but also so that the work can inform creative practice, more generally. I am actively involved within the community of immersive makers and established groups, for example, the Journalism 360 and the Google VR Journalism group. This provides critical insights and peer feedback when creating works and developing ideas to engage with. It allows for my work to be situated within a community of practitioners leading the way within the emerging field.

Among the peer reviews obtained for *The Town that Blew Away* was Louis Jebb. Jebb is CEO at immersive.ly and a former journalist.

"It's very beautiful and thought-provoking.

### **Aesthetic and pacing**

I like the daringly extended andante/largo rhythm and I get the idea of not showing the speaker (or was he somewhere in some shot, and did I miss him?).

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<sup>1</sup> Feedback from the industry guests at the Royal Television Society, London 2015, can be found here: <https://www.youtube.com/watch?v=ocmk3OHkBM8>

And your composer has done you proud. I like the way the reverberant figures "drop" down into the cavernous Wild West.

The camera occasionally wobbling in the wind feels like part of the tumbleweed aesthetic. It catches the remorseless West Texas weather.

### **The medium**

In the end the pace of the piece encourages exploration in the sphere.

As does your trusting the video unadorned (no graphics or stats or overlays).

Both of which are things which give the format validity.

Where less (pace and graphic signalling) is more."

Sarah Redhol, one of the leading 360-film experts and co-founder of Immersive Shooter, provided the following peer-review;

"From a totally virgin view on the experience, I found the narrative at the end hard to reflect on properly. With so many metaphors (which were beautiful, by the way), I found myself rewatching so I could have the time I needed to properly decode each metaphor. I wonder, with so much reflection time at the beach immediately prior, if it would be possible to split it up? Like to read a line and then pause the audio to reflect. Then read a line, and pause. I found myself rewatching and closing my eyes to have the mental capacity to deconstruct the metaphors--and I may not have needed to close my eyes if there was a break there. Perhaps that totally would not translate well. Not sure. The audio was beautiful."

The community of practice, which I am actively engaged with, enable a peer review process to take place to assist in critically examining and developing the work, similar to reviews of journals that are revised and developed. Through these reviews, some of the scenes were lengthened to allow more reflection and other areas were developed to think more carefully about the research questions at the heart of the pieces. This is an important part of the development stage and one that is critical to research-led practice and in evaluating the contribution that they are making to the field of practice.

A similar review process takes place in written submissions, which help to evaluate the contribution to the field of immersive technology. The journals and chapters within this portfolio reflect and extend knowledge within this field and this has been evident through the impact within the academic community. Output 3, published within the *Journal of Media Practice*, is one of the first to document understandings of Immersive Journalism and look at

how VR is being used by mainstream media organisations. The significance of this journal is clear through the number of reads documented through *Sage Publications*. Within the first four months of publication, it had been read more than 500 times, the average for other papers being 109<sup>2</sup>. This makes it one of the most read articles within the Journal of Media Practice within a short span of time.

The peer reviews are indicative of this, including,

“This was an excellent piece of research, one that is, dare I say it, ground-breaking when it comes to VR and Immersive Journalism.”

Reviewer 1, Journal of Media Practice

The research-led practice, published within *Screenworks*, was the first in this peer-reviewed journal to address cinematic VR and the impact for production and analysis. The practice element reached 150 views, within an eight month period<sup>3</sup> and sparked debates around the mode of practice to explore space and place.

“I think this is a fundamentally interesting piece and should be published; but perhaps with more critical reflection on the relative usefulness of the Keiller model; and a recognition that the narrative and structure can disorient the viewer, in ways that don’t allow Chungking to speak for itself.

This reflection will be a valuable addition to the growing genre of 360 documentaries.”

Reviewer 1, Screenworks

“Contemplation in Chungking succeeds as a 360 film because it enables the viewer to absorb the environment in detail; most of its narrative is supplied through voice-over and thereby overcomes the static position of the camera.”

Reviewer 2, Screenworks

Developing the concept of presence in relation to an increase in sensory stimuli has started to initiate a new field of study and methodological approach, which in turn will provide a

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<sup>2</sup> On April 10<sup>th</sup>, 2018, the journal was accessed to understand the impact of the paper in question. The paper had attracted 522 views. The other eight papers within the journal edition had on average 109 views (38, 156, 61, 60, 58, 361, 70, 68). It is too early to assess impact from citations.

<sup>3</sup> There were 150 views, via the Screenworks site, as of April 10<sup>th</sup>, 2018.



framework for other academic studies. The chapter, where this is situated (Output 5) has been downloaded 858 times within a ten-month period<sup>4</sup>.

The peer reviews further evidence this:

“This is overall a very interesting paper...Very interesting findings and novel approach.”

Reviewer 1, ARVR book chapter

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<sup>4</sup> There were 858 downloads online via the views, via the Springer website, as of April 10th, 2018.

### III. A description, synthesis and evaluation of any links between the outputs and the development of the publication of evidence

In the previous two sections, an evaluation of the individual outputs has been made in terms of originality and impact. Through this analysis, links between the outputs and the contribution of knowledge of the publication as a whole emerge. These are aligned to the influences in the research, outlined in the autobiographical context, which frame the ideas that fuse into a unitary body of work.

The portfolio of work presents an argument for how presence is manifested within immersive media, identifying the development from storytelling to storyliving. There are key areas; immersion in media practice, how presence is realised and multi-sensory inputs. These links will now be analysed and evaluated to understand how the realisation of a storyliving approach answers the research question of how presence manifests itself in a non-directed subjective immersive experience.

#### *Immersion*

Understanding immersion and presence as two distinct qualities is critical. Presence, as noted, defines that moment when you lose all sense of disbelief, the feeling of 'being there'. Immersion, is where this discussion begins.

Immersion, defined in section 1:1, is realised within the portfolio's practice and scholarly outputs and where this research began. In the context of storytelling and in media forms, immersion is to be understood as a state of mind where the external world is excluded from thoughts, allowing complete focus in experiencing the narrative form. As Ryan (1993) identifies, this could be in the form of a novel, or a film, where you can become caught up in the text, losing hours in being absorbed in the form. For Murray (2017), immersion lies in our own ability to actively create our belief in the media and "we focus our attention on the enveloping world and we use our intelligence to reinforce rather than to question the reality of the experience." (2017:136).

As much as Rose (2012) argued that a desire for immersion was the consequence of behavioural changes, where the emerging participatory media culture of the internet afforded new narratives that encourage participation for immersion, Brooks (2003) looks to immersion from the perspective of traditional oral storytelling. When a story is well told, an immersive environment is created by the storyteller which draws on expressions and descriptions that

add the details that, he argues, technological media cannot: “technological additions should complement the immersion already present in the human system” (Brooks 2003:4).

With this understanding of the conceptual frameworks of immersion, the links between the portfolio of work can be analysed. Identification with a character or place can be attributed to a sense of immersion and this is drawn out within this portfolio of work. Identification with a character allows a user to become immersed when they can be “cognitively identified and emotionally empathized with one of the characters of the story” (Zhang *et al.* 2017 np). Ryan (2003) argues that when immersed in a media form we achieve “a state of intense focus on a narrative, elicited by a strong sense of place and the joy of exploration and brought about by emotional attachment to characters”. This level of immersion allows for the participatory nature of the media to emerge and a connection to the story that is essential if one is to be *lost* in its form. Participation can emerge from the identification with the characters, as Witmer and Singer (1998) suggest, “when identifying with a character in a book or movie, individuals tend to put themselves in the character’s place, and in a sense, experience what that character experiences” (1998:227).

In this portfolio of work, the imagery of the person has equivalence with the character. The link to New Journalism and the prominence of the role the journalist plays is influential in understanding how this contributes to a sense of immersion. For New Journalism, the role of the journalist is central to the understanding and consequently the immersion the narrative allows. Arlen (1972) categorized the journalist as more of an ‘impresario’, linking the audience’s capacity of immersion to that the role the journalist plays. To embed these ideas within my practice in this portfolio, the framing of the image allows a deep connection with the audience enabling immersion. This is most prominent in the early work (Output 1), with myself as a reporter, full frame in the shot, talking about the impact of taking substances used for drug-rap. The image of myself full screen and the eye contact that is maintained creates the isolated relationship between the reporter and the audience (fig. 4). The ideas behind this technique is then used in Output 4. A character in Chungking Mansions moves towards the camera and looks straight down the lens (fig. 5). For this moment, only you and him exist in this environment. When immersed in a headset, there is an increased level of intensity. To conceptualise this as a technique to invoke immersion within the practice, the analysis of these ideas are brought together in outputs 2 and 5. The immersion that a connection with a character brings provokes a strong reaction with the audience. Within one

of the outputs, there was a sense that it can evoke a sense of shock and surprise and as some of the written research drew out, it felt intimidating (Jones and Dawkins 2017).

Some materials have been removed from this thesis due to Third Party Copyright. Pages where material has been removed are clearly marked in the electronic version. The unabridged version of the thesis can be viewed at the Lanchester Library, Coventry University

Figure 4...An insight to engage the viewer into the reporter's space.



Figure 5...An inquiring look within Chungking Mansions. As the man steps closer to the camera and looks all the way in, this is distorted within a headset view.

Through this technique, the connection between the audience face to face, or in the same virtual space, builds a deep relationship. This creates immersion and a sense of presence and is a filmic device that has been developed through this portfolio.

### *Presence*

There is a clear thread of immersion that is implicit in the portfolio of work and synthesised to be understood by these key characteristics. Immersion is generally considered a positive reaction for media makers with the belief that the more immersive a media technology is, the more powerful the experience will be. Some critics will argue otherwise, with Gander (1999) stating that it is a myth that immersivity can be enhanced with an increase in sensory information and active agency or participation. This conclusion is reached on the basis that

evidence is purely speculative and Gander argues that an empirical model of experiences needs to be realised to understand whether immersion creates a more powerful experience. This body of work looks at the more distinct form of presence and it is through the unitary body of work that a framework to understand how presence is manifested within immersive experiences emerges.

For Slater (1999, 2003), immersion and presence are “logically separable”. The distinguishing feature is that immersion is in the perception and objective characteristics, and presence is the subjective response to that. For Slater they work together, with one being the technology behind the immersive experience and presence being the human response. The distinction is clear and provides a useful framework for understanding the terminology that is often confused and used interchangeably. However, it does not allow for non-technological forms of immersion, for example, literature and art, that have previously been discussed within this framework and identified by scholars such as Ryan (2013). At this stage, it is important to note that the technological capability itself is not a distinguishing feature of the experience that delivers presence, despite the argument presented by Slater. McMahan argues that the experience is “not totally dependent on the physical dimensions of the technology” (McMahan 2003:68). Other studies have shown that multisensory cues that can bring a sense of presence, rather than the realism of the virtual reality environment (Dinh *et al.* 1999).

In the context of this portfolio of work, the understanding of presence is one that is subjective, as Slater argues, and derived from the notion of suspending all disbelief in the world (Pimental and Texaria (1993), where the mediated world is not mediated (Lombard and Ditton 1997).

It is important to address the limitations of immersive media that are defined by presence, which this portfolio of work argues can be found in the subjective quality of the work, or even the ‘artificial’ concepts (Lombard and Ditton 1997). It is certainly not a given that any immersive experience will evoke a sense of presence. However, the links between this portfolio of work can be brought together to understand how it can be manifested. This has been influenced largely by characteristics that Lombard and Ditton (1997) and Heim (1993) argue as key components to enable presence.

For Heim, presence will be realized in a virtual environment that has simulation, interaction, artificiality, immersion, telepresence and full-body immersion. (1993:110). Developing this work, Lombard and Ditton found that presence became apparent through a combination of

six factors including the quality of social interaction, virtual realism, the effect of transportation, the immersivity of the interface, agency in the environment and the social impact of what occurs.

It is imperative to reflect on the timing of this work and the focus on the computer-generated environments of the nineties that both studies emerged from. The impact of these studies have allowed researchers to study forms of video games aesthetically. There are limitations when applied to cinematic virtual reality and immersive media in the form of 360-degree film. Transportation, full-body immersion and artificiality, for example, can all be found in CGI environments, but the technology within cinematic virtual reality does not afford such experience. Through this portfolio of work, these characteristics have been explored to present an adapted framework to identify characteristics that emerge from a concept of presence in immersive media.

Agency in an experience is a defining feature of presence. All the immersive experiences that make up this portfolio of work allow the user to play an active role. There is no role for the auteur to determine what the narrative will be, instead it is the user that defines this. Immersion can be more directed with attention cues directing the story arc, as we have seen in earlier examples, including *The Displaced* (New York Times 2015). When it comes to presence, there needs to be a sense of agency for the viewer within the experience, and that moment where the suspension of disbelief is achieved. When non-virtual experiences are unique and determined by our own being in the environment, it is important to replicate that within any immersive media developing presence from experience. This approach began in the early outputs of the portfolio as an initial exploration. By using production techniques, environments were altered to give a sense of the experience. For example, within the stories of drug-rape (Output 1), the bar environment used a blur effect and camera shakes to create the experience of being out of control. This same technique was applied within the Chungking films (Output 4) to create a similar experience. The experience is not directed. The audience is not told that they should be feeling this. The environments and how they are portrayed and linked are determined by the creator but the experience is subjective. The lack of directed narrative is explicit and unique in my later work and common to my practice. This has arisen from a development of how we achieve presence and answers the questions at the heart of this thesis.

Without a clear directed narrative for the audience to follow, it is essential to ensure that other ideas evolve for the practice to have meaning and not simply be an experience for the audience without purpose. Meaning needs to be derived from an experience and enable

thoughts to be challenged or changed, developing the notion of the essence of virtual reality in Heim's earlier work. The practice elements of this body of work and in other media that has been exhibited, all share important reflections on character. This can be in the form of the person or, as the i-docs research points to it, character that can be interpreted as a location. It is here that reality is a 'shifting concept' and one therefore, that can be drawn out in the work within this portfolio. What is important is "the notion of the 'real' embraces the breadth of lived experience" (Aston *et al.* 2017).

### *Adding sensory stimuli*

In addition to agency and connection with a place or character to understand presence in immersive media, the use of sensory stimuli also link the outputs. This work was developed from existing interdisciplinary work on senses and experiences. The importance of this is well documented with Antunes (2016) arguing "audiences experience a film with all their senses and create perceptions before the conscious mind has an opportunity to connect metaphors or make sense of the experience" (p. xi). Anthropologists have long established the need for multisensory exploration, with Rodaway noting that "everyday experience is multisensual, though one of more sense may be dominant in a given situation" (1994: 5). Outputs 4 and 5 have been produced to draw together ideas in multimodal work and how increasing sensory stimuli can produce a heightened sense of presence. The final two experiences were also created with a multimodal application where viewing conditions incorporate heat and olfactory stimuli.

There is existing academic work around increasing sensory stimuli within virtual environments. Munyan *et al.* (2006) discovered a link between increasing the number of senses that were stimulated to a greater level of presence. However, academic studies have largely been overshadowed by research devoted to increasing the visual and the quality and resolution of the technology (Burdea & Coiffet 1994). To be able to produce experiences that generate a sense of presence, the work has to address the experience as a whole, not just through one or two channels of information, in this case, the audio and the visual. Spence, Sanabria, & Soto-Faraco (2007) identified the brain as judging experiences as a perceptual whole and this is evident throughout our everyday nonvirtual life (Calvert, Spence, & Stein 2004). There is significant work that evidences the impact that a multisensory experience has on enjoyment (Spence 2002) and memory recall (Dinh *et al.* 1999), a key trigger in understanding presence after an experience.

Ethnographic studies concerning sensory experiences demonstrate how it elicits stronger, multiple layers of knowing (Pink 2015) whilst allowing for new understandings to be

developed (Howes 2003). Howe's work explores how sensory ethnography can reveal new understandings and configurations across cultures, in particular "forms of social organization, conceptions of self and cosmos, the regulation of the emotions, and other domains of cultural expression" (Howes 1991:3). The experiences within this portfolio of works explore the notion of culture, space and social issues and so the work of Howes has enabled the practice to explore how an ethnographic sense can enhance the experience of being present in a virtual environment. The focus of these works have been closely linked to Pink (2015) and Ingold (2000), arguing for sensory ethnography to be more focused on the experiential nature of the medium to understand better "people's perceptions of the world around them (2000:285). This is closely linked to the work established in immersion and presence that the portfolio has sought to achieve through the research objectives. The principles of Pink (2006) encourage sensory exploration through a focus on perception, place, knowing memory and imagination. To understand this in practice, I developed immersive experiences that would be multisensory and not reliant on an audio or visual basis. Gallace *et al.* (2012) argued that in order to create virtual environments that would "feel real", they needed to reproduce the same neuronal activation that external stimuli would, whether that be heat, touch, taste or smell. When the experience was produced from Chungking Mansions (output 4), there was a sense of emptiness that could only be qualified by the lack of heat and smell that intensified the feeling of being there in the environment. Through experimenting and adding these elements to the experience, Output 5 details how this changed the sense of presence and intensified the feeling of being fully immersed. The final two practice outputs were also designed to capture multi-sensory inputs. *The Town that Blew Away* (Output 6) relies on added heat in the environment and *Shameful Conquest* (Output 7) was designed to include the effect of wind and different smells that were represented within the visual, for example, fish and chips on the beach or the scent of the seaside. This was developed with reference to research linking smells to memory (Dinh 1999) as the experience was reminiscent of the UK, positioning the experience as one Britain, post-Brexit. It focuses on Antunes' proposition that "the experience is the message": "it is the experience – not the medium alone – that defines the perceptual nature of the message" (2016:13).

### *From Storytelling to Storyliving*

As the links between the outputs emerge, presence can be understood as manifesting itself within immersive media where there is connection with characters, agency in an



environment, challenges or changes to perceptions and varying degrees of sensory stimuli. This evaluation of the links in the outputs answer the question at the heart of the research around the location of presence. What also arises is a change in the concept of how we understand media and a move from an approach led by storytelling to one rooted in experience that can be defined as storyliving. Storyliving is a distinguishing feature and one that links all the outputs to define a new field of study.

The concept of the ‘lived story’ has been the subject of interdisciplinary research around cultures and experiences looking at how this can bring transformations in understanding across disciplines (Emigh 1996; Maschio 1994). Since 2017, industry publications have been defining immersive storytelling, as storyliving. Aside from the practice of immersive media, it is growing as terminology within cultural and commercial circles from The Drum stating, “brands need to do more than just tell a story. They need to live them” (2017) and that people “demand experiences that truly matter” (The Drum 2017).

Camille Cellucci, head of production at immersive studio, The Void said,

“What we’re really moving into in this new world is ‘story-living’. We’re creating spaces and worlds where people have a chance to live out their own stories within a framework that we design” (Rolling Stone 2018).

Maschio and Baumann (2017) argued that the distinctive nature of journalism within virtual reality was an audience living the story, as opposed to being told it. Through an approach of storyliving, it would expand perspectives and the audience would be left with a powerful emotional experience. These are the key factors evident throughout this portfolio of work. Early work in immersive journalism, changed the perspective from the reporter telling the story to the reporter living the story. Although the technology wasn’t available at this time to allow the audience to live that experience, it allowed for the audience to expand their perspective and created an emotional experience, as evidenced through the responses and awards given for the immersive journalism. In the final output, *Shameful Conquest*, the experience is reminiscent of British culture and evokes an emotional response to a country that is divided.

Aside from the anthropological approach to the lived story, it can also be traced to earlier philosophical thought that has been influential in my research and links the outputs to an approach where there is a non-directed subjective narrative, critical to allowing an audience to live a story.

Walser's ideas of the 'spacemaker' (1991) is as a 'magician' that creates a cyberspace where different realities can emerge. This is critical to the understanding of storyliving and a non-directed narrative where audiences can take away different experiences. Within the Chunking Mansions film (Output 4), audiences have developed different narrative ideas around the juxtaposition of cultures and how communities are formed and merge. This is a direct response to being able to create a space for living an experience.

The sequence of images below (figure 6, figure 7, figure 8) evidence this. The vast and diverse environments that are portrayed are open to a number of different interpretations and the reality that is formed by the audience is one that develops from their own experience. Within figure 7, we see an environment filled with people hurrying and taking part in different activities but a focus on people eating their lunch can develop a different narrative around a closed community, seeking solitude amidst a busy environment. Figure 7 and figure 8 explore the vastness of a secluded environment. Despite appearing deserted, realities can still emerge around how the place has changed. Questions around whether it has always been like this or whether this is a reflection on a changing time. The experience will all depend on the audience's understanding from the experience as a whole.



Figure 6...The business of Chungking Mansions.



Figure 7...A deserted beach with just a dog and a couple exploring the morning sun.



Figure 8...The Town that Blew Away. The remnants of an environment left deserted.

Identifying storyliving as critical to presence within immersive media builds on the philosophical ideas of Heidegger, McLuhan and Heim, who have influenced phenomenological thought within new technology. Richard Coyne (1994) first connected the ideas from Heim's perspective that new realities and worlds would unfold within virtual reality. He urged us to take a Heideggerian approach that would value the technology in a new way, not bound or limited by previous constraints of what it is.

“In appreciating that using VR is not like operating puppets, we see that we are not constrained (as though by strings), that we can achieve something other than entertainment, that the puppets can change identity to become the people operating them” (1994:71)

It is through recognising the differences that Coyne argues we can begin to discover Heidegger's disclosure and find new metaphors within the technology. Coyne's application

of Heideggerian thought is focused on VR within the early nineties. By applying it within broad immersive media, we can start to see new practices emerging that are not bound by established restrictions or practices. This is evident in the non-directed narratives. The immersive experiences are not bound to a specific narrative or focus. Instead the audience is responsible for their experience, or within the constraints of the technology and the worlds created for them to explore.

The question at the heart of Heim's seminal work on the *Metaphysics of Virtual Reality* (1994) asks, 'what is the essence of VR, its inner spirit, the cultural motor that propels the technology?' (1994:552). If we take the 'technology' broadly to embrace the concept of immersive media, the answer is within the storyliving approach, realised when we feel presence in the virtual experience. It is presence that gains a deeper understanding and new perspectives that is the essence of virtual reality. This is, what Heim, refers to as the 'cultural motor that propels the technology'.

For Maschio, storyliving develops when the user embodies a virtual character, explores the space and makes sense of their own experience. The latter two are evident in this portfolio of work and have been analysed in this section. Embodying a virtual character is, as discussed, questionable. De la Peña (2017) argued for embodiment as central to experiencing presence but this is not established within this portfolio of work. None of the immersive experiences or scholarly work presented in this portfolio have used the ideas of embodiment to navigate an immersive experience. Instead, you are present in an experience without the need to look at your own arms or body in the world. This links more closely to Maschio's ideas of dual unity, developed from Keeler (2017) where there can be an identification with another whilst retaining one's own self of identity. The effect of giving oneself over to a virtual space, even if there is no formal embodiment of another, creates more of a sense of agency and vulnerability in the space. They are "straddling the divide" between the two worlds. This however, limits the sense of presence, where you lose all sense of disbelief in the world. To that extent, I argue that embodying a virtual character is not a core aspect for storyliving.

This portfolio of work seeks to address how presence manifests itself within immersive media. Through this section, the links between the outputs have been identified and evaluated to understand the core concepts necessary to realise presence and how they can be understood. The links between the work to locate presence emphasise the need to create a lived experience, which may mean the addition of sensory stimuli, deep connection with character or place to enable connection and subsequent immersion in the event, agency in

the experience and finally, a subjective non-directed narrative. At this point, presence can be realised. This combination of factors point to a new form of experience or narrative, one that we can define as storyliving.

### Part 3. Critical reflection on development as a research practitioner, research methodology and discussion for further work

- I. A critical reflection using an appropriate methodology, model or theory on the candidate's development as a research practitioner

The question at the heart of the thesis examines how presence can be located within immersive media through a range of outputs that establish practice and research in immersive experiential film. The research approach has been focused in creative practice with the interrogation of how this defines a new form of media, storyliving, that locates the audience within the experience. This is demonstrated through written analysis and qualitative research methods and then through practice applications. This portfolio has developed alongside my career as a research practitioner and through critical reflection, this journey will be analysed now through the emerging scope of the field, the privilege of the researcher and the role of the research practitioner.

#### *Emerging field of practice*

My career as a practitioner and development as a researcher is linked to establishing new ways of understanding existing fields and emerging fields of practice. The analysis of the role of the immersive journalist can be understood from assessing the roles and perception of the New Journalism movement and Gonzo journalism. Taking these ideas and concepts within immersive journalism and storytelling informs new modes of practice and analysis in immersive media. At each intersection, it can be understood as developing emerging practice.

This idea is something that is familiar to researchers working within new fields of study, where there is an opportunity and a freedom to define the genre and the concepts that are used. There are no preconceived ideas of what immersive media should or shouldn't do, or how concepts should be articulated or used in practice. It is very much a case of taking a 'playful' approach to the research to understand the genre better, following methodology that allows for free movement within a more rigid structure" (Salen *et al.* 2004:304) and as the foundation in which all aspects of human culture can emerge (Sutton-Smith 1997; Huizinga 1955). McLuhan's approach for "exploration over explanation" (Levinson 2004:4) cements the mixed methodologies used within this portfolio. Working as a research-practitioner within an emerging field of study, means that concepts from other fields of study are borrowed and developed to make sense of our own practice. This idea is not new, although lacking

research in media studies. Immersive media can be closely linked to the field of games studies, once an emerging field of study, which also drew on broad theoretical frameworks to make sense of itself. Games studies, like immersive media, brings together:

“a convergence of a wide variety of approaches including film and television theory, semiotics, performance theory, game studies, literary theory, computer science, theories of hypertext, cybertext, interactivity, identity, postmodernism, ludology, media theory, narratology, aesthetics and art theory, psychology, theories of simulacra, and others” (Wolf and Perron, 2003:2).

This portfolio lies between the intersection of philosophy, journalism and technology to form a new genre of immersive experiential media, where storyliving emerges. However, as a research practitioner, elements from games study, performance, theatre, cyber studies, media theory, aesthetics, narrativity, film and television and computer science have all been influential in developing the thoughts and concepts embedded within the portfolio.

### *Researcher Privilege*

In addition to the privilege of working within an emerging field of practice and the ability to define concepts, is the privilege of working as a research-practitioner. Assessing the development of my role leads to that acknowledgement that must be noted. It is at this point that taking a reflexive approach of positionality is important to note that the development and analysis of the field of practice is only possible due to my own privilege. When I made the move from full-time practitioner to researcher-practitioner, I could articulate questions about the choices that were made and the approach that was used within my practice. My position as a television reporter has been critical to developing the field of practice and this insider approach granted a degree of access and insight that may not have otherwise been possible. This personal experience shaped this initial research inquiry.

Jorgensen (1989:61) highlights that the researcher has many roles in the field and that the “multiple roles offers the distinct advantage of providing access to different standpoints and perspectives. The researcher gains a more comprehensive and accurate picture of what is happening”. Although relatable to ethnographic research and autoethnographic principles, it is a critical stance to understand when exploring my development as a research-practitioner and the privilege that this role brings. In developing research-led practice, I am in the fortunate position that I can explore the concepts and ideas that can enhance presence through making immersive media. These outputs can and have been exhibited in festivals

and installations, but that it is not the sole reason for the undertaking of the research. The question of how presence manifests itself within immersive media is the driving force and I take an iterative approach to testing and developing this until I have the right piece. As a full-time academic, I do not need to rely on the creation of media for commercial gain or to meet a set brief, only one that is defined by my research question. Gibson (2010) argued for this unique position that the practitioner as a researcher inhabits. Through an approach that explores theorizing concepts and exploring them in practice there is an interplay between the two forms of knowledge-making. As different ideas are drawn out, other relationships in ideas occur. This is evident throughout my work. Taking on a psychogeography approach within the filming at Chungking Mansions, created a sense of experiencing the environment but within this experience it felt empty. This then developed a new relationship through multi-sensory modes which created a new sense of presence. It is this process and the methodology of theorizing and then making, testing, failing and refining the practice that is reflected with Rancière's (2009) idea of a 'path' that researchers follow. For Rancière argued that there are "constructs to know where you are, to figure out the characteristics of the territory you are going through, the places it allows you to go, the way it obliges you to move" (2009:114). This is a unique and privileged position to be in.

In addition to this privilege, I have the benefit and access to a range of immersive media communities. I am well networked within this field of practice and recognised internationally for the work that I do<sup>5</sup>. The peer support and critical review that these communities bring help to develop practice and my work is largely situated within these, particularly Google VR and Journalism 360. This affords access to the field and also to enable critical self-reflection in the work that I do, through peer reviews. This privilege of being closely associated and researching within a practice is widely acknowledged within research methods literature, closely linked to that of autoethnography (Bochner and Ellis 1992; Chang 2007; Ellis and Bochner 2000). Bochner and Ellis (1992) argue that the autoethnographer relies on 'epiphanies' (1992:37), the moments of crises or realisation that allow insightful reflection of their experiences. Taking them from insight into valid research is the key aspect. My research does not follow an autoethnographic stance, but utilising the methods and self-reflection from my role within allows a critical reflexivity to emerge. This takes the portfolio of

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<sup>5</sup> It is extensively documented within immersive media circles, the influence and role that I have played in developing the field of practice. In 2016, I was listed within the global 100 influencers within immersive media (Onalytica 2016). In 2018, I was within the top 15 female influencers (Onalytica 2018). This acknowledgment and recognition is evidence of my position and privilege of access that this grants.



outputs away from being distinct media artefacts to a unitary body of research exploring one fundamental question.

The insider account shapes my own views and understanding about immersive media. It allows me to understand different discourses that develop within the industry to assess emerging media forms. Hammersley & Atkinson (1995) argue, 'insider' accounts can be approached for their informational insights but also for "what they tell us about those who produced them" (1995:125). This is developed through written outputs that analyse the way the industry is emerging and the forms being made.

For myself and my research trajectory, the importance is in developing an emerging field of study within immersive media. It is not enough to just present this as practice as there is a need for theorising through critical analysis and debate. Malins and Gray (1995) argue for the insights that practice-led research brings through the contribution that is made within critical contexts and it is this that informs my work. I have a responsibility, as a practitioner, to also formulate theoretical and philosophical frameworks, and not leave that, as Malins and Gray note to the 'external critic, historian or theoretician'.

By bringing together ideas from philosophy, media and technology and applying these thoughts in practice, the portfolio is bridging the gap between practice and research to develop new modes of inquiry. This is important to me as a research practitioner.

## II. Full statements on the extent of the contributions of all other persons where some or all of the outputs submitted are collaborative.

The process of media making has long been embedded within a collaborative framework, which drives new forms of production and knowledge. In an increasingly media converged industry, production more often comes, not from a solo artist but through intense collaboration, with artists contributing to either shared or individual aims (Deuze 2007). The portfolio of work is developed across creative industries, working with different practitioners and academics to develop my own positioning so that the research aims and objectives can be addressed. It is through this collaborative process that my own practice and ideas can be truly explored and formulated.

With the first output in immersive journalism, I worked extensively with cameramen and craft editors who contributed to producing the films. As the immersive journalist, I conducted the research, directed the story, determined how the narrative would be formed and developed the structure of the series of reports. I then worked with craft editors to produce the finished broadcast stories. Throughout the editorial process, stories were reviewed and analysed, in a form of peer review, by editors and producers, acting as challengers and validators to the outputs. This forms the creative process for broadcast media outputs, although the articulation of the ideas and direction that meets the research aims to understand what it means to be present in a story has developed from my work alone.

Outputs two and three are self-authored.

In the latter practice outputs that have centred around 360-degree filming, I have maintained collaborative research practices. This way of working draws together a range of expertise with different focuses. My focus and responsibility within this work is in creating the sense of presence within the media, specifically with the application of the 'spacemaker' (Walser 1991) for 'total art' (Ryan 2015). In taking this approach, my role in collaborations has been focused within directing the experience and capturing the right environments to create that sense of immersion and presence. I have led on the technical side of the productions with a strong understanding of the way in which spherical cameras work and how they can be manipulated to create the different senses of an experience. For example, in breaking a stitch line, a ghost like presence can be achieved which created a sense of unease that was

evident within the Chungking Mansions films (Output 4). I have worked with another collaborator on these projects who has led on narrative and the production side of the projects, craft editors and music composers.

Output 6, *The Town that Blew Away*, has been a solo project with the collaborative process beginning within post-production with a music composer. Working with Dr. Tom Williams, the audio and visuals were brought together to create the right sense of presence in the environment. The edit and music was analysed, tested and adapted within the post-production process.

Two of the written outputs are co-authored with the producer of the 360-degree films, Stephen Dawkins. My contribution focuses on the emerging technological questions, drawing on the roots within computer science, gaming psychology and immersive theatre. My focus is on answering the research questions at the heart of the thesis and the application of existing technological frameworks to film and understanding how presence has been generated against a theoretical basis of subjectivity in immersive journalism. My co-author has a focus in film theory and narrative forms of film documentary and takes a lead on the historical context and applications of narrative in a traditional sense. This provides a different insight to the research and answers different research questions, concerning the difference in mediums of traditional film and spherical film, which are not framed within this thesis.

The focus of my contribution through all my work is in the application of emerging technology to enhance a sense of presence. It is about analysing frameworks that have been developed within computer generated virtual reality environments and applying them to cinematic VR in a way that develops a deeper understanding of the place. I have developed the technical side of filming and construction of experiences to understand how this can be applied to answer the research questions around locating presence and my contribution to the development of this through journal publications and practice is identified.

### III. Conclusions and Future Work

Understanding presence and how it can be manifested within immersive media has been addressed throughout the portfolio of works and within the context of this critical overview. The outputs form a unitary body of work that establishes the journey from storytelling to storyliving. The critical analysis of areas including immersion, non-directed narrative and multisensory work are developed as modes of inquiry that give rise to presence within virtual environments and this is where storyliving materialises.

The portfolio of outputs has been presented to understand the interdisciplinary approach to the production of new knowledge within immersive media. This draws out elements of scholarly traditions within theatre, gaming, multi-modal work and philosophy. Taking this approach allows the field of study to emerge that brings together elements from sensory ethnography to add to experience and discover new forms of knowledge (Antunes 2016; Howes 2003) to immersion as a cultural phenomenon (Rose 2012). Philosophy of technology ideas concerning the 'spacemaker' (Walser 1991) and immersive theatre (Laurel 2013) are drawn upon to create agency within an environment and consequently the space for new narratives to emerge. This interdisciplinary approach is essential for an emerging field of study. As the now established field of Games Studies was a convergence of film, performance, literary theory, narratology and more (Wolf and Perron 2003:2), this overview positions immersive media, as a convergence of disciplines.

The portfolio of outputs outlines critical debates in existing research. This traces the development of immersive journalism with influences of saturation reporting and New Journalism and brings this into the context of immersive media, where the lens has been repositioned from being immersed through the lens of another, to stepping into the frame and being immersed as the self. The elements of presence that can be found through different narrative approaches and through the addition of sensory input, are established in outputs and analysed with regard to how they enable presence. It develops the framework established by de la Peña (2010, 2017) and adapts this for filmed experience, as opposed to CGI-environments. The practice elements of the portfolio, of which there are examples from immersive journalism through to the creation of experiential immersive films, explore these ideas. They take the concepts of the 'spacemaker' to allow agency and freedom within the narrative and the addition of sensory stimuli to heighten the element of presence. Through this exploration of ideas, the outputs provide an understanding of how emerging forms and different techniques and technologies are impacting immersive media.

This critical overview completes this body of work. Through the framework, the outputs are brought together into one body of work to examine the manifestation and meaning of presence within immersive media. The contribution of the outputs to the field of study is evidenced and articulated in the ideas formed that have been influential, not just within academic studies but within a professional context and practice. The practice work continues to be shown within exhibitions and festivals across the world, establishing its influence. The thesis traces the development of the publications and the journey of experimentation. Through this thesis, the idea of presence is developed, bringing together contributions from each output to define the field of study. Section 2:3 evaluates the links between the outputs. Through this analysis, a framework emerges to formulate how a new understanding of subjective non-directed narratives enables presence. Agency, multi-sensory stimuli and connection with characters are all found to enhance presence. The research set out to understand how presence manifested itself within immersive media and through this framework this is answered. Storyliving emerges, where the audience lives a story, as opposed to being told it. It is here that the audience can expand perspective and are left with a powerful emotional experience (Maschio 2017).

This thesis establishes immersive media from a position of storytelling to one of storyliving. When an experience can demonstrate these core elements, an audience can develop a sense of presence when they lose themselves in the virtual environment. Through establishing this as a framework for presence within immersive media, this body of work will add value to the field of study. Previously studies on immersivity and elements needed for presence have been isolated to CGI-environments (Lombard and Ditton 1997; Heim 1993). By establishing how we understand presence in immersive media and how this becomes storyliving, will prove valuable in future studies.

In developing this approach through the critical overview and the portfolio of work, there are two fundamental areas for future study that I am wanting to pursue. The first is with the limitations of a non-directed narrative. The second questions the value of virtual experiences.

When we establish presence within immersive media, storyliving emerges. The narrative is discovered from the way in which the audience explores the environment and has agency in the virtual space. The direct impact of experiencing allows for the narrative to form. This is evident in my immersive film, *The Town that Blew Away*, where exploration of the space and

the impact of sensory modes, allows the audience to find presence in the environment. They then situate themselves within this town in Texas, where life has moved on too fast, leaving the remnants of a past life. However, one element of storyliving is that an emotional impression is conveyed and this can be at the expense of conveying specific information (Maschio 2017). This has raised an interesting area for future work. Immersive media is naturally an experiential medium, but how does the creator ensure that the intended meaning is portrayed? This body of work argues for the lack of directed narrative that is essential if we are to find agency and consequently presence, but the balance between meaning and emotion needs to be understood. Strong emotional responses can be provoked within immersive media, but this can often be related to being present in the environment, rather than because of what the subject that is at the heart of the environment. In the portfolio, published works have demonstrated how responses can be centred around being in the environment rather than what was in the environment, something also found by Maschio noting, “the narrative was often overshadowed by the immersion itself, with the viewer’s primary focus remaining on being present in that space and time” (2017:14). There is a balance to be found between understanding storyliving, rather than just living.

The second area for future work is developed through the ideas of empathy and immersive media as being a tool to ‘walk in someone else’s shoes’. This thesis addresses the concerns of positioning empathy as a key aspect to immersive media. Research where experiences allow body-switching to understand different perspectives has been analysed (Slater *et al.* 2010), whilst addressing the arguments that empathy is only a subjective account, and you can only understand your own perspective of being in that environment, rather than that of the other (Nagel 1974; Chun 2016). With this in mind, questions are raised around the value of virtual experiences. Is an experience in the virtual world equivalent to that of one in the non-virtual world? Can you equate the experience of being by the British seaside with the virtual one presented in the final output in this portfolio? It is a question addressed by Madary and Metzinger where they argue for a code of ethics within virtual reality (2016). They suggest that the technology could be used as a form of torture but then question if that is equivalent to non-virtual torture. Murray had earlier questioned whether kissing an avatar could be deemed as infidelity (1997:17). Chalmers (2017) has argued that life in virtual worlds holds the same value as life in non-virtual worlds. Critics cite Nozick’s 1974 ‘Experience Machine’ thought experiment against the equivalent value of virtual experiences. Nozick asked if you had a machine that you could plug into to experience anything, would you? His argument was against this because the value is in the experience

of doing something and consequently life in virtual reality is less valuable than life in non-virtual reality.

The value of experience has also been researched at Stanford's Human Interaction Lab. In a study looking at the effects of virtual reality on children, researchers found that children often failed to distinguish between feats in real life and those in VR (Bailey and Bailenson 2017). This ranged from treating their avatar bodies as if they were their own body to recalling a memory of swimming with orcas, as if it were real, when in fact the experience took place virtually. Considerations that are developed from this address the idea of privilege and how the notion of being able to become immersed in a media form or an experience come from a position of privilege. It is important and necessary to acknowledge this as an area for future research as the impact on how we understand presence is coming from our own set of unique privileges. This is an area of work that needs development. It is linked to empathy and how we truly understand experiences and has important implications for future work.

Future practice continues to explore and take a playful, explorative approach to understanding the potentiality of the medium, not relying solely on virtual reality, but also the influence of augmented reality and holograms to explore ideas of presence. In early studies on virtual reality, Pimental and Texaria (1993) encouraged the use of VR as a form of art where artists, through simulation, will "merge together all art forms" (1993:240).

It is Heim and Lanier that offer closing thoughts that have influenced this work and my future projects. With emergent media, the big picture can get lost, in what Heim describes as the rush for content to fill the new medium. It is down to artists to guard the visionary aspects and nurture it in its infancy (1995:66). It is a warning to "not lose itself in the thrill of the content", the idea reiterated by Lanier on many occasions. A question that remains prominent at the end of this thesis, posited earlier,

"What happened to the dream of improvising reality? Shared lucid dreaming? I mean, what's the point of just making a flashier type of movie or video game?" (2017:6).

## Part 4. References

### Immersive Experiences and Community

*Clouds Over Sidra*. (2015) [immersive experience] Directed by G. Arora and C. Milk. Within

*Ghost in the Shell VR*. (2017) [immersive experience] Directed by R. Sanders. Here Be Dragons

*Hunger in LA*. (2012) [immersive experience] Directed by N. De la Peña. Emblematic Group

Journalism 360. (2015) *Journalism 360 – Online News Association*. [online] Available at: <https://journalists.org/programs/journalism-360/> [Accessed 18 Jan. 2019]

*Kiya*. (2015) [immersive experience] Directed by N. De la Peña. Emblematic Group

*Munduruku: The Fight to Defend the Heart of the Amazon*. (2017) [immersive experience] Directed by G. Boyle and J. Manisty. Greenpeace

*Stranger Things VR*. (2017) [immersive experience] Directed by R. Duffer and M. Duffer. Netflix

*Suicide Squad VR*. (2016) [immersive experience] Directed by R. McDougal. Warner Brothers

*The Displaced*. (2015) [immersive experience] Directed by B. Solomon, I. Ismail, C. Milk and J. Silverstein. New York Times

The Machine to be Another. (2019) *The Machine to be Another*. [online] Available at: <http://www.themachinetobeanother.org> [Accessed 18 Jan. 2019]



*Treehugger*. (2016) [immersive experience] Directed by R. McNicholas, E. Han Ersin and B. Steel. Marshmallow Laser Feast

Unvr.sdgactioncampaign.org. (2019) *UN Virtual Reality – United Nations Virtual Reality (UNVR), a project implemented by the UN SDG Action Campaign*. [online] Available at: <http://unvr.sdgactioncampaign.org> [Accessed 18 Jan. 2019]

*Use of Force*. (2014) [immersive experience] Directed by N. De la Peña. Emblematic Group

VR Journalism. (2019) *Google Group: VR Journalism*. [online] Available at: <http://www.vrjournalism.io/2015/07/22/google-group-vr-journalism/> [Accessed 18 Jan. 2019]

## Figures

Figure 1. Table of Outputs

Figure 2. The barrier of the screen.

Figure 3. Screenshot from ITV, reporting on Sex and the City (2007)

Figure 4. Screenshot from ITV, entering into the reporter's space.

Figure 5. Screenshot from *Chungking* (2016)

Figure 6. Screenshot from *Chungking* (2016)

Figure 7. Screenshot from *Shameful Conquest* (2017)

Figure 8. Screenshot from *The Town that Blew Away* (2017)

## References

- Aitamurto, T., Zhou, S., Sakshuwong, S., Saldivar, J., Sadeghi, Y., & Tran, A. (2018) 'Sense of presence, attitude change, perspective-taking and usability in first-person split-sphere 360 video'. *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems* (p. 545). ACM
- Antunes, L. (2016) *The Multisensory Film Experience*. Bristol, UK: Intellect
- Aston, J., & Gaudenzi, S. (2012) 'Interactive documentary: setting the field'. *Studies in Documentary Film* 6 (2), 125-139
- Aston, J., Gaudenzi, S. & Rose, M. (Eds.). (2017) *i-Docs: the evolving practices of interactive documentary*. New York: Columbia University Press
- Barlow, J. P. (1990) 'Being in Nothingness. Virtual Reality and the Pioneers of Cyberspace'. *Mondo 2000* (2) 32-33
- Bordwell, D., Staiger, J., & Thompson, K. (1985) *The classical Hollywood cinema: Film style and mode of production*. New York: Columbia University Press.
- Borgmann, A. (2009) *Technology and the Character of Contemporary Life*. Chicago: University of Chicago Press
- Botvinick, M. and Cohen, J. (1998). 'Rubber hands 'feel' touch that eyes see'. *Nature*, 391 (6669), pp.756-756
- Boyer, S. (2009) 'A virtual failure: Evaluating the success of Nintendo's Virtual Boy'. *The Velvet Light Trap* (64), 23-33
- Boynton, R. (2005) *The new new journalism*. New York: Vintage Books
- Brooks, K. (2003) There is nothing virtual about immersion: Narrative immersion for VR and other interfaces. Retrieved from <http://alumni.media.mit.edu/~brooks/storybiz/immersiveNotVirtual.pdf> (accessed August 2018)
- Burch, N. (1979) *To the distant observer*. Berkeley: University of California Press
- Burdea, G., and P. Coiffet, (1994) *Virtual Reality Technology*. New York: John Wiley & Sons
- Calvert, G., Spence, C., & Stein, B. E. (Eds.) (2004) *The Handbook of Multisensory Processes*
- Capote, T. (1965) *In Cold Blood*. New York: Vintage
- Chalmers, D. J. (2017) 'The virtual and the real'. *Disputatio*, 9 (46), 309-352

Chalupsky, P. (2014) 'London of the Mind—The Narrative of Psychogeographic Antiquarianism in Selected London Novels of Peter Ackroyd'. *English Language and Literature Studies*, 4 (1), 10

Chang, H. (2007) *Autoethnography as method*. Walnut Creek, CA: Left Coast Press

Chun, W. H. K. (2008) 'The enduring ephemeral, or the future is a memory'. *Critical Inquiry*, 35(1), 148-171

Chun, W. (2016). *WEIRD REALITY: Head-Mounted Art & Code : Wendy Hui Kyong Chun*. [online] Vimeo. Available at: <https://vimeo.com/214713185> [Accessed 13 Oct. 2018].

Coward, R (2013) *Speaking Personally: The Rise of Subjective and Confessional Journalism*. Basingstoke: Palgrave Macmillan

Coyne, R. (1994) 'Heidegger and virtual reality: The implications of Heidegger's thinking for computer representations'. *Leonardo*, 27 (1), 65-73

Coyne, R. (1995) *Designing information technology in the postmodern age: From method to metaphor*. Boston: MIT Press

Cruz, R., & Fernandes, R. (2011) 'Journalism in virtual worlds'. *Journal For Virtual Worlds Research*, 4 (1)

Danaher, J (2017) 'The Reality of Virtual Reality: A Philosophical Analysis'. Philosophical Disquisitions

de la Peña, N., Weil, P., Llobera, J., Giannopoulos, E., Pomés, A., Spanlang, B., ... & Slater, M. (2010) 'Immersive journalism: immersive virtual reality for the first-person experience of news'. *Presence: Teleoperators and virtual environments*, 19 (4), 291-301

de la Peña, N. (2017) 'Towards behavioural realism: experiments in immersive journalism'. In Aston, J., Gaudenzi, S., and Rose, M.,. *i-docs: the evolving practices*

Debord, G. (1958) 'Theory of the Dérive'. *Internationale situationniste*, 2 (20.05)

Deuze, M. (2007) 'Convergence culture in the creative industries'. *International Journal of Cultural Studies*, 10 (2), 243-263

Dinh, H., Walker, N., Hodges, L., Song, C., and Kobayashi, A. (1999) 'Evaluating the Importance of Multi-Sensory Input on Memory and the Sense of Presence in Virtual Environments'. *Proceedings of IEEE Virtual Reality*, 222-228

Dooley, K. (2017) 'Storytelling with virtual reality in 360-degrees: a new screen grammar'. *Studies in Australasian Cinema*, 11(3), 161-171

Dreyfus, H. L. (1991) *Being-in-the-world: A Commentary on Heidegger's Being and*

Dreyfus, H. L. (1992). *What computers still can't do: A critique of artificial reason*. Boston: MIT Press

Ellis, C., and Bochner, A. (1992) 'Telling and performing personal stories'. *Investigating subjectivity: Research on Lived Experience*, 79-101

Ellis, C. , & Bochner, A.P. (2000) 'Autoethnography, personal narrative, reflexivity'. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 733-768). Thousand Oaks, CA: Sage

Farina, G. (2014) 'Some reflections on the phenomenological method'. *Dialogues in Philosophy, mental and neuro sciences*, 7(2), 50-62 at <http://www.crossingdialogues.com/Ms-A14-07.htm>.

Gallace, A., Ngo, M. K., Sulaitis, J., & Spence, C. (2012) 'Multisensory presence in virtual reality: possibilities & limitations'. In *Multiple sensorial media advances and applications: New developments in MulSeMedia* (pp. 1-38). IGI Global.

Galloway, D., McAlpine, K. B., & Harris, P. (2007) 'From Michael Moore to JFK Reloaded: Towards a working model of interactive documentary'. *Journal of Media Practice*, 8 (3), 325-339

Gander, P. (1999) 'Two myths about immersion in new storytelling media'. Lund University *Cognitive Studies*, 80. [http://www.pierregander.com/research/two\\_myths\\_about\\_immersion.pdf](http://www.pierregander.com/research/two_myths_about_immersion.pdf) (accessed August 2018)

Gaudenzi, S. (2013) *The Living Documentary: from representing reality to co-creating reality in digital interactive documentary* (Doctoral dissertation, Goldsmiths, University of London)

Gibson, R. (2010) 'The known world'. *TEXT: Journal of writing and writing courses*, 8

Grant, G. (1970) 'The "New Journalism" We Need'. *Columbia Journalism Review*.

Hammersley, M., & Atkinson, P. (1995) 'Insider accounts: Listening and asking questions'. *Ethnography: Principles in practice*, 124-156

Harcup, T., & O'Neill, D. (2001) 'What is news? Galtung and Ruge revisited'. *Journalism Studies*, 2 (2), 261-280

Hardee, G. M., & McMahan, R. P. (2017) 'FIJI: a framework for the immersion-journalism intersection'. *Frontiers in ICT*, 4, 21

Heidegger, M. (1977) *The Question Concerning Technology, and other essays*. New York: Harper & Row

Heidegger, M., Macquarrie, J., & Robinson, E. (1962) *Being and Time*. Malden, MA: Blackwell

Heilig, M. (1998) 'Beginnings: Sensorama and the Telesphere Mask'. In Dodsworth, C. (Ed.) *Digital Illusion*. pp. 343-351. New York: ACM Press

Heim, M. (1996) 'The Design of Virtual Reality'. In Featherstone, M., & Burrows, R. (Eds.). *Cyberspace/ Cyberbodies/ Cyberpunk: Cultures of Technological Embodiment*. Pp. 65-78. London: Sage

Heim, M. (1994) *The Metaphysics of Virtual Reality*. Oxford: Oxford University Press

Herrera, F., Bailenson, J.N., Weisz, E., Ogle, E. & Zaki J. (2018) 'Building long-term empathy: A large-scale comparison of traditional and virtual reality perspective-taking'. *PLoS ONE* 13(10)

Hohenberger, E. (2007) 'Vietnam/USA: Trinh T. Minh-ha in an Interview'. *Truth or Dare: Art and Documentary*, 104-121

Howes, D. (1991) *The Varieties of Sensory Experience*. Toronto: University of Toronto Press

Howes, D. (2003) *Sensual Relations: engaging the senses in culture and social theory*. Ann Arbor: University of Michigan Press.

Huizinga, J. (1955) *Homo Ludens. A Study of the Play-Element in Culture*. Boston: The Beacon Press

Ikei, Y., Abe, K., Hirota, K. and Amemiya, T. (2012) 'A Multisensory VR System Exploring the Ultra-Reality'. In *18th International Conference on Virtual Systems and Multimedia* (pp. 71-78). IEEE

Jones, S. (2014) 'Changing the Face of News: the Reporter as a Celebrity'. In Sepie A., *Search for the Real: Authenticity and the Construction of Celebrity*. Oxford: Inter-Disciplinary Press

Jones, S. (2017) 'Disrupting the narrative: immersive journalism in virtual

Jones, S and Dawkins, S. (2017) 'Contemplation in ChungKing: an immersive psychogeography journey through the heart of Hong Kong'. *Screenworks*. Vol 7

Jones, S. and Dawkins, S. (2018) 'The Sensorama Revisited: Evaluating the Application of Multi-sensory Input on the Sense of Presence in 360-Degree

Immersive Film in Virtual Reality'. In *Augmented Reality and Virtual Reality* (pp. 183-197). Cham: Springer

Jones, S. (2000) 'Towards a philosophy of virtual reality: Issues implicit in "consciousness reframed"'. *Leonardo*, 33 (2), 125-132

Jones, S., & Dawkins, S. (2018) 'Walking in someone else's shoes: creating empathy in the practice of immersive film'. *Media Practice and Education*, 19(3), 298-312

Jorgensen, D.L., 1989. The methodology of participant observation. In Pogrebin, M. R. (Ed.) *Qualitative approaches to criminal justice: Perspectives from the field* (pp. 17-26). Thousand Oaks, CA: Sage.

Kearney, R. (2002) *On Stories*. London: Routledge

Kerrigan, S., Berkeley, L., Maher, S., Sergi, M., & Wotherspoon, A. (2015) 'Screen Production Enquiry: A study of five Australian doctorates. *Studies in Australasian Cinema*, 9(2), 93-109

Kool, H. (2016) 'The ethics of immersive journalism: a rhetorical analysis of news storytelling with virtual reality technology' *Intersect: The Stanford Journal of Science, Technology & Society* 9, no. 3 1-11

Krueger, M. (1996) 'Reality Stinks'. VRMM96, International Conference on Virtual Systems and Multimedia '96, Sept 18-20, Gifu, Japan, keynote

Lanier, J. (2017) *Dawn of the New Everything: Encounters with Reality and Virtual Reality*. New York: Henry Holt and Company

Laurel, B. (1991) *Computer as Theatre: A dramatic theory of interactive experience*.

Laurel, B. (2013) *Computers as Theatre*. Addison-Wesley. (2<sup>nd</sup> ed) Reading: Addison-Wesley

Lebovic, S. (2016) *Free speech and unfree news*. Cambridge, MA: Harvard University Press

Lehmann, S., & Murray, M. M. (2005) 'The role of multisensory memories in unisensory object discrimination'. *Cognitive Brain Research*, 24(2), 326-334

Levinson, P. (2004) *Digital McLuhan: A guide to the information millennium*. New

Lipartito, K. (2003) 'Picturephone and the information age: The social meaning of failure'. *Technology and Culture* 44(1), 50-81

- Locke, J., Apparatus, E. and Nidditch, P. (1975) *An essay concerning human understanding*. Oxford: Clarendon Press
- Lombard, M., & Ditton, T. (1997) 'At the heart of it all: The concept of presence'. *Journal of Computer-Mediated Communication*, 3 (2)
- Madary, M. and Metzinger, T. (2016) 'Recommendations for Good Scientific Practice and the Consumers of VR-Technology'. *Frontiers in Robotics and AI*, 3
- Madigan, J. (2015) *Getting Gamers: The Psychology of Video Games and Their Impact on the People Who Play Them*. Lanham, MD: Rowman & Littlefield
- Maggio, R. (2014) 'The anthropology of storytelling and the storytelling of anthropology'. *Journal of Comparative Research in Anthropology & Sociology*, 5(2)
- Malins, J., & Gray, C. (1995) 'Appropriate research methodologies for artists, designers & craftspersons: Research as a learning process'. In Proceedings of 'Making It': UK Crafts Council conference. Wakefield, UK: Woolley Hall. <http://carolegray.net/Papers%20PDFs/cc.pdf> (Accessed September 2018)
- Marshall, P. D. (2010) 'The promotion and presentation of the self: celebrity as marker of presentational media'. *Celebrity studies*, 1(1), 35-48
- Marwick, A. E. (2013). *Status update: Celebrity, publicity, and branding in the social media age*. Yale University Press
- Maschio, T., & Baumann, K. (2017). *Storyliving: An ethnographic study of how* Google News Lab
- Mateer, J. (2017) Directing for Cinematic Virtual Reality: how the traditional film director's craft applies to immersive environments and notions of presence' *Journal of Media Practice* 18:1, 14-25
- McLuhan, M. (2001). *Understanding Media*. Milton: Taylor & Francis
- McLuhan, M., & Fiore, Q. (1967) The medium is the message. *New York*, 123, 126-128
- McMahan, A (2003) *Immersion, Engagement, and Presence: A New Method for Analyzing 3-D Video Games*. New York: Routledge
- Merleau-Ponty, M. (2011) *Phenomenology of Perception*. London: Routledge
- Morse, M. (1986) 'The television news personality and credibility: Reflections on the news in transition'. In Modleski, T. (Ed.), *Studies in entertainment: Critical approaches to mass culture* (pp. 55-79). Bloomington: Indiana University Press
- Morse, M. (1998) 2004. News as performance: The image as event. In Allen, R. C., Hill, A (Eds.) *The Television Studies Reader* (pp 209–25). New York: Routledge

- Murphy, J.E. (1974) 'The new journalism: a critical perspective'. *Journalism and Communication Monographs*, 34
- Murray, J. (1997) *Hamlet on the holodeck : the future of narrative in cyberspace*. New York: Free Press
- Neveu, E. (2014) 'Revisiting narrative journalism as one of the futures of journalism'. *Journalism Studies*, 15 (5), 533-542
- Orbe, M. P. (2009) 'Phenomenology'. In *Encyclopaedia of Communication Theory* pp. 750-752. Thousand Oaks, CA: Sage
- Owen, T (2016) 'Can journalism be virtual?'. In *Columbia Journalism Review*
- Perron, B. and Wolf, M. (2003). *The video game theory reader*. New York, N.Y.: Routledge.
- Peters, C. (2011) 'Emotion aside or emotional side? Crafting an 'experience of involvement' in the news'. *Journalism*, 12 (3), 297-316
- Petkova, V. I., & Ehrsson, H. H. (2008) 'If I were you: perceptual illusion of body swapping'. *PloS one*, 3 (12), e3832
- Pimentel, K. and Teixeira, K. (1993) *Virtual Reality*. New York: MacMacGraw-Hill
- Pink, S. (2015) *Doing sensory ethnography*. Los Angeles, Calif: Sage
- Plimpton, G. (1966) 'The story behind a nonfiction novel'. *The New York Times*, 16 (01)
- Rancière, J. (2009). *Aesthetics and its discontents*. Cambridge: Polity Press.
- Rolling Stone (2018) 'The Future of VR is Storyliving and Cross Platform Play' [www.rollingstone.com/glixel/features/the-future-of-vr-is-story-living-and-cross-platform-play-w518296](http://www.rollingstone.com/glixel/features/the-future-of-vr-is-story-living-and-cross-platform-play-w518296)
- Rose, F. (2012) *The Art of Immersion*. New York: Norton
- Ryan, M. L. (2003) *Narrative as virtual reality: Immersion and interactivity in literature and electronic media*. Baltimore, USA: The Johns Hopkins University Press
- Ryan, M. L. (2015) *Narrative as virtual reality 2: Revisiting immersion and interactivity in literature and electronic media* Baltimore, USA: The Johns Hopkins University Press
- Salen, K., Tekinbaş, K. S., & Zimmerman, E. (2004) *Rules of Play: Game design fundamentals*. Boston: MIT Press



- Saltz, D. Z. (2001) 'Live media: Interactive technology and theatre'. *Theatre Topics*, 11(2), 107-130
- Schuemie, M. J., Van Der Straaten, P., Krijn, M., & Van Der Mast, C. A. (2001) 'Research on presence in virtual reality: A survey'. *CyberPsychology & Behavior*, 4(2), 183-201
- Skarbez, R., Brooks Jr, F. P., & Whitton, M. C. (2017) 'A survey of presence and related concepts'. *ACM Computing Surveys (CSUR)*, 50 (6), 96
- Slater, M. (1999) 'Measuring Presence: A Response to the Witmer and Singer Questionnaire' *Presence: Teleoperators and Virtual Environments*, 8(5), 560-566
- Slater, M. (2003) 'A note on presence terminology'. *Presence Connect*, 3(3), 1-5
- Slater, M., Pérez Marcos, D., Ehrsson, H., & Sanchez-Vives, M. V. (2009) 'Inducing illusory ownership of a virtual body'. *Frontiers in Neuroscience*, 3, 29
- Slater, M., Spanlang, B., Sanchez-Vives, M. V., & Blanke, O. (2010) 'First person experience of body transfer in virtual reality'. *PloS one*, 5(5), e10564
- Slater, M., Usoh, M., & Steed, A. (1994) 'Depth of presence in virtual environments. *Presence: Teleoperators & Virtual Environments*', 3(2), 130-144
- Spence, C. (2002) 'Multisensory attention and tactile information-processing'. *Behavioural brain research*, 135(1-2), 57-64
- Spence, C., Sanabria, D., & Soto-Faraco, S. (2007) 'Intersensory Gestalten and crossmodal scene perception'. *Psychology of beauty and Kansei: New horizons of Gestalt perception*
- Stein, R. (2005). *Media Power*. New York: Authors Choice Press
- Sutherland, I. E. (1965) 'The ultimate display'. In Packer, R and Jordan K (2001) *Multimedia: from Wagner to virtual reality*. New York: Norton
- Sutherland, I. E. (1968, December). 'A head-mounted three dimensional display'. In Proceedings of the December 9-11, 1968, fall joint computer conference, part I (pp. 757-764). ACM.
- Sutton-Smith, B. (1997) *The Ambiguities of Play*. Cambridge, MA: Harvard University Press
- Turnock, R. (2000) *Interpreting Diana: Television audiences and the death of a princess*

- Van der Haak, B., Parks, M., & Castells, M. (2012) 'The future of journalism: Networked journalism'. *International journal of communication*, 6, 16
- Wahl-Jorgensen, K. (2013) 'Subjectivity and Story-telling in Journalism: Examining expressions of affect, judgement and appreciation in Pulitzer Prize-winning stories'. *Journalism Studies*, 14(3), 305-320
- Walser, R. (1991) 'The emerging technology of cyberspace'. In Helsel, S.K, Roth, J. (Eds.), *Virtual Reality: Theory, Practice, and Promise*. Westport, CT: Meckler
- Webb, B. R. (1996) 'The role of users in interactive systems design: when computers are theatre, do we want the audience to write the script?'. *Behaviour & Information Technology*, 15(2), 76-83
- Willis, J. (2009) *The Mind of a Journalist*. Thousand Oaks: SAGE.
- Wirth, W., Hartmann, T., Böcking, S., Vorderer, P., Klimmt, C., Schramm, H., Saari, T., Laarni, J., Ravaja, N., Gouveia, F., Biocca, F., Sacau, A., Jäncke, L., Baumgartner, T. and Jäncke, P. (2007). A Process Model of the Formation of Spatial Presence Experiences. *Media Psychology*, 9(3), pp.493-525
- Witmer, B. G., & Singer, M. J. (1998) 'Measuring Presence in Virtual Environments: A Presence Questionnaire'. *Presence*, 7(3), 225-240
- Wolfe, T., & Johnson, E. W. (1973). *The New Journalism. With an anthology edited by Tom Wolfe and E.W. Johnson*. New York, Harper & Row
- Wolfe, T. (1970) 'The New Journalism'. In *Bulletin of the American Society of Newspaper Editors*
- Zachara, M., & Zagal, J. P. (2009) 'Challenges for success in stereo gaming: a Virtual Boy case study'. In Proceedings of the international conference on Advances in Computer Entertainment Technology (pp. 99-106). ACM.
- Zelizer, B. (2009). *The changing faces of journalism*. London: Routledge
- Zhai, P. (1998). *Get real: a philosophical adventure in virtual reality*. Lanham, Md: Rowman & Littlefield
- Zhang, C., Perkis, A., & Arndt, S. (2017) 'Spatial immersion versus emotional  
2017 Ninth International Conference on  
Quality of Multimedia Experience (QoMEX) (pp. 1-6). IEEE

## Appendix 1

### *Immersive Journalism in Practice (Film).*

This collection of evidence from professional practice demonstrates the original concept of immersive journalism in practice, from the journalist's perspective. The work covers a range of outputs that demonstrate the background and development of work. Work used from 2005 – 2010.

Some materials have been removed from this thesis due to Third Party Copyright. Pages where material has been removed are clearly marked in the electronic version. The unabridged version of the thesis can be viewed at the Lanchester Library, Coventry University

## Appendix 2

Jones, S. (2014) 'Changing the Face of News: the Reporter as a Celebrity'. In Sepie, A (Ed.) *Search for the Real: Authenticity and the Construction of Celebrity*, Oxford: Inter-Disciplinary Press.

## Changing the Face of News: the Reporter as a Celebrity

Sarah Jones

### Abstract

The role of the journalist is to be an independent voice, informing and reporting on events objectively. But, in a celebrity-driven culture and within a medium that calls for entertainment and big ratings, television news is evolving into an extended drama, with journalists taking the leading role. This paper will explore the changing role of the television journalist, focusing on those who appear to be taking on the role of a celebrity. With magazine deals, public speaking opportunities and reality television, the television journalist is becoming a celebrity to the point where the public know more about their private life than their public life. The paper will argue that, if a television journalist reaches this level of recognition, the way we understand their ability to do their job has changed. In theory, a reporter's role is to present an objective viewpoint and report on a *real* situation, but is that story received differently if it is presented by CNN's Anderson Cooper, a familiar face who reportedly has a contract worth USD \$4million for this role? The analysis will draw on the author's personal experience in television journalism to understand how a reporter can become part of the story, which, in turn, can affect the judgment of the reporter and how this is received by the audience. This paper will include material based on journalists who have played themselves in fictional television shows and films to understand how this has changed the way they work and whether they believe it has affected the audience's perception of the credibility and stature of the reporter. The State of the News Media Report<sup>6</sup> found that in the last year, cable news in the United States had seen audience ratings fall by 13.7%, despite investments in the celebrity anchors and star reporters. This paper will argue that we need to develop more tools to understand the relationship between the journalists, their celebrity status, the impact upon the story they are covering and a celebrity-obsessed, media-savvy public.

**Key Words:** Television journalist, celebrity news, infotainment, role of celebrity.

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There is a new breed of television celebrity. It is not the reality TV star, the heiress, or the soap star who we have seen rise to stardom in other chapters of this volume. This is the *television journalist*. This was traditionally a role based on anonymity, where the objective was to offer an independent voice to inform and report on events with truth and accuracy. The BBC, when introducing news programmes in 1954, captioned them it as an *illustrated summary of the news* with only an audio overlay to pictures of world events. It was thought that seeing the faces behind the news would be too distracting for the audience. At the time, the BBC Director General Sir Ian Jacob identified the difficulties of producing news for television because 'a good many of the main news items are not easily made visual - therefore we have the problem of giving news with the same standards that the corporation has built up in sound.'<sup>7</sup> Perhaps, this is why, nearly sixty years on, we have grown accustomed to the increased quality of supporting visuals, theatre-style sets, and dramatic language delivered by familiar characters

<sup>6</sup> The State of the News Media," Pew Project for Excellence in Journalism. 2009 <http://stateofthemedias.org/>; retrieved 10.01.2012

<sup>7</sup> [http://news.bbc.co.uk/onthisday/hi/dates/stories/july/5/newsid\\_3856000/3856397.stm](http://news.bbc.co.uk/onthisday/hi/dates/stories/july/5/newsid_3856000/3856397.stm); retrieved 30.09.2012

in the evening news. News organisations have begun to re-position the news as modern celebrity culture continues to dominate television schedules. Well known reporters and news anchors add glamour and familiarity to the news broadcast. Television news is evolving into an extended drama with journalists taking the leading role. These television news celebrities are changing the way the public view the journalists who work within this medium. If they are indeed celebrities, it brings into question their effectiveness as a journalist.

Television is still considered to be one of the most trusted sources of news, only surpassed by radio, according to research by Britain's media regulator, Ofcom.<sup>8</sup> Trust in television news has increased since 2010, with 58% of viewers more likely to trust what they see, compared with 54% of viewers previously. Furthermore in 2006, GlobeScan conducted research, in conjunction with the BBC, Reuters, and the Media Centre. In a survey conducted in ten countries, it found that national television news was the most trusted source by 82 per cent. Therefore, we need to question the legitimacy of television news within an industry that calls for entertainment, drama, and big ratings, when it is 'a vehicle for engagement in the democratic process, feeding off and into domestic and political relations.'<sup>9</sup>

The perceived need to entertain and dilute television news, in favour of sensationalism and celebrity, has become a concern, not only for media academics, but also those working within the industry. Neil Postman (1986) formulated the thesis that public discourse was assuming an entertainment form in the US, long before the public were introduced to the multi-million pound salaries of celebrity anchors and a world where reporters competed for the most Twitter followers in order to increase their perceived fan base. Developing his ideas from *Amusing Ourselves to Death*<sup>10</sup>, Postman and Powers acknowledge the changes to consuming television news in *How to Watch TV News* (2008), where the news organisations are opting for the style of entertainment programmes, with slick lighting and production values. The fast pace of these is presumed to be attractive to the younger viewer and, therefore, increases the total potential audience. Daya Thussu (2007) recognised that making news entertaining is the 'number one priority for broadcasters' with its 'emphasis on personalities, style'<sup>11</sup> amongst other things.

This change in the delivery of the news programmes has, inevitably, meant an evolution in the role of the journalist. Traditionally, the role was to be the *truth-teller*, an independent voice that was reporting on moments that make history, an objective onlooker to make sense of troubles, but now organisations are placing the emphasis on creating drama for ratings. What is dubbed as *infotainment* – a synthesis of information and entertainment – is a fairly new concept yet this is what the public is now witnessing. The sensationalized television news has arisen from a need to boost ratings and compete with highly produced programmes, between which the news is usually sandwiched.

An analysis of the news broadcasts of three US television companies on a randomly selected date in August, 2012, found evidence of the over-produced, dramatic sets and type of language that are synonymous with infotainment.<sup>12</sup> There is also an element of simplifying the news

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<sup>8</sup> Adults media use and attitudes report 2012, Ofcom, <http://stakeholders.ofcom.org.uk/binaries/research/media-literacy/media-use-attitudes/adults-media-use-2012.pdf>, retrieved 25.07.2012

<sup>9</sup> Thussu, Daya Kishan, *News as Entertainment*. London: Sage, 2007.

<sup>10</sup> Postman, Neil, *Amusing Ourselves to Death: Public Discourse in the Age of Showbusiness*. New York: Viking, 1985.

<sup>11</sup> Thussu, Daya 2007

<sup>12</sup> Analysis taken place on primetime news shows on August 16<sup>th</sup>, 2012. Anderson Cooper 360 on CNN, Nightly News on NBC and the O'Reilly Factor on Fox.

which is a growing concern to media purists. The images used in NBC Nightly News illustrate this. In this example, an analysis by the NBC political unit has found ‘spending on 2012 presidential radio and TV ads has now surpassed the half billion dollar mark.’<sup>13</sup> To illustrate the scale of this expenditure, it used a full screen table relating it to what else 500 Million American Dollars could buy.

‘feed ‘9.2 million’ children for 50 days,  
immunize ‘29 million’ children for life  
clean water for ‘500 million’ children for 40 days  
buy ‘166 million’ anti-malarial mosquito nets’

The italicised amounts were stressed, just in case the audience could not understand the point being made. To clarify the point further, Brian Williams, the multi-million dollar anchorman for NBC Nightly News, finished the item by stating that the political parties are ‘instead buying television commercials and the real general election campaign hasn’t even started yet<sup>14</sup>.’ Using a comparative tool is a common practice in television news reports now and is often used to make the news more easily understood. It is a contributing factor to the sensationalised reporting that is turning the news into infotainment.

A further example of infotainment that featured in NBC’s Nightly News, was again about the use of a created visual. This was to replace the void within a picture-less story, a news story where there are few pictures to illustrate. The *grim news* story tells how a Black Hawk helicopter was taken down in Afghanistan with seven Americans among the dead. This is a valid news story, one of national interest within an ongoing story; however, with no pictures available, the graphics team created an animation showing the helicopter taking off over the desert. Over the words ‘the helicopter was struck by enemy fire and destroyed in a devastating crash,’<sup>15</sup> the graphic depicted a fire engulfing the helicopter as it falls out of shot. It bore an uncanny resemblance to a computer game animation and could have been seen as trivialising a tragic news story.

The use of created graphics of this type is prominent in the O’Reilly Factor, a flagship programme on the American channel Fox News. It was once the most watched cable news television program on American television.<sup>16</sup> In the opening headline teasers, President Obama answers a question over comments made by his Vice-President Joe Biden. The picture of President Obama is frozen as a still shot, in black and white, with the news anchor asking, ‘did president Obama throw his vice president under the proverbial bus?’<sup>17</sup> The graphic shows a bright yellow school bus, with the engines revving, driving off into the distance. The graphics depicted are not needed and serve only as entertainment and to sensationalise the story.

The celebrity reporter plays a role in NBC’s Nightly News in the form of Chelsea Clinton, the daughter of former American President Bill Clinton. She holds no journalistic qualifications, nor experience, but in November, 2011, NBC decided she was what was needed to ‘draw on her remarkable experience and have her tell stories that she feels strongly about,’<sup>18</sup>

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<sup>13</sup> NBC Nightly News, August 16<sup>th</sup>, 2012

<sup>14</sup> NBC Nightly News, August 16<sup>th</sup>, 2012

<sup>15</sup> NBC Nightly News, August 16<sup>th</sup>, 2012

<sup>16</sup> The State of the News Media," Pew Project for Excellence in Journalism. 2009

<sup>17</sup> O’Reilly Factor, Fox News, August 16<sup>th</sup>, 2012

<sup>18</sup> [http://www.huffingtonpost.com/2011/11/28/chelsea-clinton-nbc-steve-capus-skeptics\\_n\\_1116186.html?ref=chelsea-clinton](http://www.huffingtonpost.com/2011/11/28/chelsea-clinton-nbc-steve-capus-skeptics_n_1116186.html?ref=chelsea-clinton), Chelsea Clinton At NBC: Steve Capus Defends Hiring; retrieved 25.08.2012

according to NBC News president Steve Capus. The move to appoint Clinton was criticised as publicity-seeking and taking jobs away from journalists in an ever-competitive market, but this is a tactic that has been used by many news organisations in recent years, following the belief that audiences are attracted to familiar faces and trust what they have to say. In Chelsea Clinton's *Making a Difference* segment, she reported on efforts to save African elephants that are being illegally hunted to feed the growing ivory trade in Asia<sup>19</sup>. The audience then saw Clinton in the studio following up on the story; however, she only spoke for 18 seconds, so it is legitimate to ask how necessary it was to have her presence in the studio and what it added to the story. Having a reporter in the studio is a device used by news organisations to develop a story further, or to add any breaking news. At other times, it can be used to raise the profile of the reporter, in this case Chelsea Clinton. It can also be seen as cost-effective as a way of stretching out a story further. However, in this instance, the report on location told the whole story and 18 seconds in a studio to camera doesn't develop the story further or add new information.

Using a celebrity reporter like Chelsea Clinton is not something that is unique to NBC. We have seen other political and well-known figures take on roles as reporters; for example, NBC's Today Show hired another politician's daughter in the guise of Jenna Bush (2009), whereas British breakfast show, Daybreak, added soap actor Adam Rickitt and former Deputy Prime Minister John Prescott to its journalist team covering political conferences in 2010. Many of these decisions have been at the suggestions of *news consultants*. These consultants have been brought into news organisations to identify what changes need to be made in order to boost viewing figures of the news programmes. The apparent findings of various news consultants suggest viewers to want good looking, likeable people it can relate to.

If you can read the news convincingly in television, you can have a successful career as an anchor, no journalism experience required. This is not to say there aren't bright men and women who are knowledgeable journalists and who can and do serve as anchors. But the problem is that it is almost impossible for the viewer to figure out which anchor knows his stuff and who is faking it.<sup>20</sup>

The focus on fame and appearance has distorted the public's perception of the reporter and anchor and, instead, develops them into a star to boost ratings<sup>21</sup>. The news is no longer perceived to be the same if you have an *actor* anchoring the news. It lacks the depth and clarity that is expected. When an audience is expecting a truth-teller and someone with authority, they are merely watching someone who is *playing* that role. It is the acting that is of concern to Postman and Powers, 'It encourages producers and news directors to think about what they are doing as artifice, as a show in which truth-telling is less important than the appearance of truth-telling.'<sup>22</sup>

Martin Bell, a war correspondent with a plethora of awards, identifies the turning point for sensationalised news with celebrity faces. This came in the eighties when newsreaders were

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<sup>19</sup> NBC Nightly News, August 16<sup>th</sup>, 2012

<sup>20</sup> Postman, Neil, & Powers, Steve, *How to Watch TV News*. London: Penguin, 2008.

<sup>21</sup> Ratings, or viewing figures, are collated by news organisations to provide an indication of performance. They give an indication of the number of viewers a programme is reaching which is equated to a measure of success. If a programme is seen to be losing ratings, then news organisations will take steps to reverse the trend by analysing personalities on screens, content and delivery, amongst other things.

<sup>22</sup> Postman, Neil, & Powers, Steve, *How to Watch TV News*. London: Penguin, 2008.



replaced by journalists.<sup>23</sup> While some were grateful for the regularity of work schedules and the related salary increases, others viewed the role as limiting, to reading words off an autocue.

To develop the role of the reporter and anchor further, newsrooms introduced the *live two-way*, where the reporter is at the scene of an event and talks about what has happened. It can operate as a question and answer between the news anchor and the reporter. It is effectively a news package, but without the pictures. This gained prominence in the nineties with Marshall noting that it was then that the reporter becoming *part* of the story. With cuts to newsroom budgets, often pictures were taken from a news wire, an organisation where video is collated and sold to broadcasters without copyright restrictions, and assembled into a video package in the newsroom, without the reporter leaving their desk. If the reporter was traveling to a story on location and reporting from there, they were encouraged to be as visible as possible to add authority and put the story in context.

‘Reporters on location became storytellers. They were allowed to show their reactions and some of their personality. They were encouraged to be seen at the heart of the action.’<sup>24</sup>

Yet, when a reporter is beginning their career, the common lesson they are taught is that the story is the most important thing. It is not about the reporter. The story needs to be told in a visually stimulating way that conveys the truth of the situation. The industry standards are never to put yourself in the piece unless it is going to add something and don’t touch anyone on camera. The latter is due to the need to maintain an objective standpoint at all times. However, in the past decade, the role of the reporter has become more visual in shaping and telling the story. *Get your face on screen* is often an instruction by the news editor on covering the story after it was decided that, if viewers were recognising their journalists, they would start to build a relationship and this in turn would increase ratings. However, many journalists are reluctant to cover stories in this way, with the UK’s Channel 4 News’ Jon Snow stating, ‘The danger is that the focus goes to the reporter and not to the event. I have always had my doubts about celebrity reporters, but that is the way the world is going.’ If the reporter is placing themselves at the heart of the story, the attention shifts from the story to the person who is covering it.

This drive toward reporter involvement is nowhere more prominent than in the work of CNN. As a 24 hour global news provider, they are relying on the celebrity status of their presenters and reporters to drive ratings and create headlines. Its tagline reads, *the most trusted name in news* but that can be called into question with a rise in the number of celebrity reporters becoming the story.

One of CNN’s star anchors is Anderson Cooper. He grew up as a known face because of the attention his mother – socialite and heiress Gloria Vanderbilt –commanded. He now has a reported salary of \$11million and his own syndicated chat-show. The 2010 Haiti earthquake saw his position as a reporter questioned when he was portrayed more as an action-hero than an objective observer. Cooper was filmed rushing into a building to rescue a young boy. A photographer was on hand from Getty Images (a photo syndication company) to capture Cooper’s heroic efforts. Cooper took to his CNN blog to write the account of the rescue.

I ran to where he was struggling, and picked him up off the ground. I brought him to a spot about a hundred feet away. I could feel his warm blood on my

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<sup>23</sup> Bell, Martin, *Anchors away, my boys*. London: British Journalism Review, 2011.

<sup>24</sup> Marshall, Penny, *Haiti and the Reporters Without Boundaries*. London: The Times, 2010.

arms. I stood him up, but he was clearly unable to walk. He wiped his bloody face, and I tried to reassure him. He had no idea where he was, and he clearly couldn't walk, so I picked him up again and handed him over to someone behind that makeshift barricade.<sup>25</sup>

The report drew criticism from many journalists who favoured the traditional objective observer approach to journalism, including Jon Snow, an award-winning UK news anchor of the Channel 4 News: 'I never think of inserting myself into the story. I just report. I just ask people to show me things – to take me places – to tell me their story.'<sup>26</sup> In an increasingly competitive and oversaturated market, CNN knew that it was the kind of footage that would be talked about and applauded by fans of Cooper. CNN International executive, Tony Maddox, claimed it was a 'Watershed moment in the history of TV news'<sup>27</sup> and one that meant that reporters 'finally freed themselves from some editorial constraints of the past.'<sup>28</sup> This highlighted the transition in the value of television news from the perception that an audience wants unbiased, accurate, and objective reporting, to one where they want the atmosphere, involvement, and a firsthand account of the story in a way that matches what they see in Hollywood films and dramas.

From what has been discussed thus far, it may be pertinent to consider whether there is a line that television reporters shouldn't cross, where the objective reporting meets the sensationalised drama. It comes down to the level of involvement. Michael Jerney, the Director of News for ITV, an independent television company in the UK, insists that reporter involvement is not a problem in television news and can provide a useful tool in bringing the audience closer to the story<sup>29</sup>. However, Jerney maintains that there is a line that shouldn't be crossed. An involved reporter should be a 'trusted guide seen to be there, questioning authority, taking people to different places, but not at the centre of story.'<sup>30</sup> If you compare two reports from Haiti, the first being the above rescue by Anderson Cooper and the second, a rescue covered by ITN's Bill Neely, you can see where the line has been crossed in the first making Cooper the focal point of the story. It is a thin line, according to Marshall for reporters acting in specific ways:

those between authority and arrogance, for example, and between courage and recklessness. There is also a thin line between capturing the drama and becoming part of it. The challenge for TV reporters now – in the age of celebrity is to stay the right side of the line.<sup>31</sup>

Anderson Cooper has made many attempts to convince viewers that he is the *real deal*; a sharp, investigative journalist that provides an accurate account on the state-of-the-world. He does, however, identify a change in the role of the traditional *all-knowing, all-seeing person who speaks from on high*, and he notes that the news anchor is to be:

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<sup>25</sup> Cooper, Anderson, *In the midst of looting chaos*. Retrieved from CNN:

<http://ac360.blogs.cnn.com/2010/01/18/anderson-in-the-midst-of-looting-chaos> 2012, 01 03.

<sup>26</sup> Marshall, Penny, *Haiti and the Reporters Without Boundaries*. London: The Times, 2010.

<sup>27</sup> Marshall, Penny, *Haiti and the Reporters Without Boundaries*. London: The Times, 2010.

<sup>28</sup> Marshall, Penny, *Haiti and the Reporters Without Boundaries*. London: The Times, 2010.

<sup>29</sup> Jerney, Michael, in conversation with author, 19.01.12

<sup>30</sup> Jerney, Michael, in conversation with author, 19.01.12

<sup>31</sup> Marshall, Penny, *Haiti and the Reporters Without Boundaries*. London: The Times, 2010.

real and you have to admit what you don't know, and talk about what you do know, and talk about what you don't know as long as you say you don't know it.<sup>32</sup>

This creates a shift in what is expected of a journalist. If there is a new type of anchor that doesn't *know everything*, then their level of authority has diminished. The argument is that if this is the case, then the new "real" anchor has embarked on a new journey as a journalist and the all important skill of delivering authoritative facts has vanished and the TV news anchor has become a commentator. This change in the perception of the television journalist is something familiar to news consultant Marc David, who spent more than three decades at the Canadian Broadcasting Corporation (CBC)<sup>33</sup>. Whilst familiarity of a reporter is a positive thing and essential to the success of the news programme in developing a loyal audience, the concern he has is with many organisations trying to sell *personality* rather than news. David identifies two reporters emerging in the television news industry. The first, being the traditional real journalist, who David defines as being someone who cares about the story, wanting to make a better world by reporting wrongs or correcting injustices. They may be a familiar face but the story is always what drives the reporter. The second type is the journalist emerging in a society where celebrity consumption and the desire to be famous supercedes the traditional journalism credos. They are the reporters who are keen to become stars and are always trying to figure out how they can promote themselves within the story. As David notes, they are the journalists who always think, *how could this story make me look good?*. He estimates that the number of journalists with this mindset has risen from 50% to 80% in the last couple of years.<sup>34</sup>

David maintains that the *stardom factor* can be managed and some journalists achieve fame, but are still trusted. Martin Bell is one example of this type of reporter. The danger, though, is when the journalist becomes more widely recognised as a personality than a journalist. The question then becomes: are they a journalist or an entertainer? This is the difficulty in perceiving Anderson Cooper as a journalist. By taking on the role as a journalist who is involved and at the heart of the story, the audience is trying to understand how they perceive him and whether this is as a news anchor, or an entertainment show presenter. It's the line where if the audience knows more about your private life, can they trust what you're saying? As David states, 'when you become the news, you shouldn't report the news.'<sup>35</sup> Anderson Cooper has always been in the public eye, but, on July 2, 2012, he became the top story when he announced, 'the fact is, I'm gay.'<sup>36</sup> In an email that was published with his permission, he addressed the issues concerning people in the public eye announcing their sexual orientation. In the email he states that he is gay and hasn't come out before because of his concerns that he is a journalist and didn't want his private life becoming public knowledge.

'Since I started as a reporter in war zones 20 years ago, I've often found myself in some very dangerous places. For my safety and the safety of those I work with, I try to blend in as much as possible, and prefer to stick to my job of telling other people's stories, and not my own. I have found that sometimes the less an

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<sup>32</sup> Cooper, Anderson, *Dispatches from the Edge*. New York: HarperCollins, 2006

<sup>33</sup> Marc David shared his thoughts on the topic of reporters becoming celebrities based on his own experience as a news editor in a television broadcasting company and also as a news consultant, where he is brought into organisations to improve audience viewing figures. The conversation with the author took place 26.08.12

<sup>34</sup> Conversations with Marc David, Journalist MD, 26.08.12

<sup>35</sup> Conversations with Marc David, Journalist MD, 26.08.12

<sup>36</sup> Cooper, Anderson, The Fact is I'm Gay. Retrieved from <http://andrewsullivan.thedailybeast.com/2012/07/anderson-cooper-the-fact-is-im-gay.html>; retrieved 2012, 08, 15

interview subject knows about me, the better I can safely and effectively do my job as a journalist.

I've always believed that who a reporter votes for, what religion they are, who they love, should not be something they have to discuss publicly. As long as a journalist shows fairness and honesty in his or her work, their private life shouldn't matter.<sup>37</sup>

What Anderson Cooper is saying is a view held by many. A journalist needs to remain impartial, blending in, to tell the story. This is the traditional view of the role, with reporters taking an objective standpoint. It is the view that has been discussed earlier in this chapter. However, by becoming the news and achieving the level of celebrity status that he has, he is unable to do this. Anderson Cooper cannot blend into a political rally when he is adorning the front pages of the newspapers. Viewers can be distracted by what they know of his private life. There is also an imbalance when conducting interviews. Usually, the journalist will have the upper-hand in driving the interview forward. If the subject knows too much about a personality, as we have discussed in relation to celebrity status, then they may feel like they have the advantage and, so, the interview loses credibility.

The contents of Cooper's social media Twitter page, highlights the contradictions with his ideals of working as a journalist, where personal views should not be disclosed. Nearly three million people follow Cooper for news updates to find out what is on his show, to glimpse behind the scenes, and to see what interests their favourite anchor. Despite believing that a journalist should not let their private thoughts known, Cooper regularly *tweets* his.

On June 14<sup>th</sup>, 2012 he tweeted the following:

@andersoncooper: I find it so infuriating that a charity would raise millions of dollars claiming to help veterans and then not send the money where they say

@andersoncooper: We've uncovered yet another charity that supposedly helps veterans and dogs but the money, isn't going where u think. Details @AC360<sup>38</sup>

Another demonstration of how Cooper airs his personal views, is in the role that he has taken alongside his duties as a news anchor. In addition to his news programme, Cooper has a syndicated entertainment chat show of the name *Anderson*. In this programme, Cooper kicked a guest off the programme. Although this was on a chat show, rather than the news, he is still known as a journalist and should stay true to his ideals that a journalist should never let his own views come through. The incident happened in May, 2012, when Cooper invited Sarah Burges, who reportedly spent half a million dollars on plastic surgery, onto his show. She caused outrage by giving her seven year old daughter vouchers for liposuction and breast implants when she turns eighteen. Cooper wasn't happy with the interview and the answers that she was giving, so he stopped the segment. He said, 'I try to be really polite to all my guests. I think you're dreadful and I honestly don't want to talk to you anymore.'<sup>39</sup>

Although much of the audience (and probably viewers) agreed with Cooper, as a journalist he has the responsibility to represent only the facts and let the viewer make up their own mind.

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<sup>37</sup> Cooper, Anderson, The Fact is I'm Gay. Retrieved from <http://andrewsullivan.thedailybeast.com/2012/07/anderson-cooper-the-fact-is-im-gay.html>; retrieved 2012, 08, 15

<sup>38</sup> Cooper, Anderson, Twitter, <http://twitter.com/andersoncooper>, retrieved 14.06.2012

<sup>39</sup> [http://www.huffingtonpost.com/2012/05/23/anderson-cooper-human-barbie-sarah-burge\\_n\\_1538857.html](http://www.huffingtonpost.com/2012/05/23/anderson-cooper-human-barbie-sarah-burge_n_1538857.html), retrieved 25.08.2012

By editorialising the story, Cooper attempted to influence people's thoughts by emphasising his own.

In previous chapters, we have seen the identification of new celebrities. Claudia Weber identifies how reality TV has created new stars meaning that many more people are being called and perceived as celebrities. Cooper is one such example of this and it could be argued that news is the greatest example of reality television so maybe it is only right that news organisations are creating their own stars. They are doing this in many ways, including having reporters and anchors take on public speaking opportunities, cameo roles in films, and reality TV shows to boost the celebrity status of their anchors and reporters. By increasing the celebrity status of the television journalists, the audience get to see more about their lives and it is at this point that the celebrity status becomes a problem, when, as Boorstin notes, someone is 'well-known for their well-knownness.'<sup>40</sup> As we have seen with Cooper, this then changes perception of the person and they are no longer just an objective observer.

Chris Hollins, a BBC Breakfast presenter, saw an elevation in his level of celebrity status. In 2007, he took on a cameo role in the film *Run Fat Boy Run*. Playing the part of a journalist when you *are* a journalist causes a degree of concern. Are audiences able to accept that you are, at times, not truthful in what you are saying and merely reading a script? Hollins felt that audiences could understand the distinction. 'There's so many examples of it now, that audiences don't get confused.'<sup>41</sup> This is an area that needs considerably more research.

In 2009, Hollins took part in the prime-time Saturday night show, *Strictly Come Dancing*, with celebrities partnering a professional dancer and competing to win the *mirror ball trophy*, in which he surprised many and won. With an audience of more than eleven million watching the final, it was no surprise that he reached a new level of celebrity and one that could potentially distort the audience perception of the truth and accuracy that he valued in his reports.

Hollins' own objectivity in reporting had not changed and the stories were approached in the same way. However, he was now limited in providing a true *account* of a story. When covering a football game, Hollins would observe and film crowds to add atmosphere to the story. However, now fans wanted to dance in front of him. More people were also willing to do interviews so they could talk to the *dancing king*. It resulted in Hollins having to leave the cameraman to get the shots so that an accurate portrayal could still be presented. As he remarks, 'when trying to observe a situation, whether crowd trouble, without participating, it becomes difficult. People see who you are, want to say something and want to do something different'<sup>42</sup>. This altered perception of the journalist limits the role of the reporter, as the public subsequently perceives of them as celebrities, which can distort the event they are trying to report on.

When a celebrity shows up at a scene, his or her presence can change that scene dramatically. But journalists don't want scenes to change. They want to report on what is happening naturally in the world; they don't want that scene contaminated by the presence of a celebrity.<sup>43</sup>

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<sup>40</sup> Boorstin, Daniel, *The Image: A Guide to Pseudo-Events in America*. New York: Vintage Press, 1961

<sup>41</sup> Hollins, Chris, in conversation with the author, 12.01.2012

<sup>42</sup> Hollins, Chris, in conversation with the author, 12.01.2012

<sup>43</sup> Willis, Jim, *The Mind of a Journalist*. London: Sage, 2010. p.107

The very notion of a television journalist being on screen ensures that the level of anonymity achieved by many print journalists is not possible. However, the nature of the job – to be a truth-teller and observer – is still the same. The level of celebrity status a journalist achieves can distort the way he is perceived and the situation on which he is reporting. It is perhaps time to question the way in which the television journalist should be seen and understood. ‘The focus, at least for a while, can turn to that celebrity and away from the event. And the event itself can change because the television camera is there.’<sup>44</sup>

Having familiar faces in news organisation can be positive. Companies build a *family of faces* so that viewers can recognise the journalists and feel like it’s a friend updating them on events of the day. It draws on Rob Turnock’s idea in his 2000 book *Interpreting Diana*, that television acts as a comforter and when there is a large scale, traumatic events, people will turn to continuous coverage and analysis to help them find an explanation in the absence of answers.<sup>45</sup> The death of Princess Diana can help us understand more about the relationship between audience and news presenter who Morse (Turnock, 2000) describes as being ‘charismatic individuals who seem to know all the facts.’<sup>1</sup> Willis (2007) writes that news anchors are like the characters in long-running soaps, that you identify with and feel like you have a long standing relationship with. They are always there at the same time when you need them which constitutes a sense of normality for the viewer. Therefore, in large-scale news events that shock, viewers turn to the news anchor as their *trusted friends* for a sense of normality in the explanation.

However, the extent of the celebrity status that some journalists have achieved has the potential to damage their credibility as truth tellers so it is imperative that more tools are developed to understand this and reevaluate how the audience receives the news. It is difficult for the viewer to accept the credibility of a newsreader conducting an interview with a senior politician if they have previously witnessed them developing into a new celebrity from reality television (Claudia Weber). In the same degree, the audience cannot receive an objective account of a natural disaster if the reporter is at the heart of the story and involved on a personal level. This is when the viewer has to consider adjusting the way in which they perceive and understand the news and rely upon its authority.

### Notes

<sup>1</sup> [http://news.bbc.co.uk/onthisday/hi/dates/stories/july/5/newsid\\_3856000/3856397.stm](http://news.bbc.co.uk/onthisday/hi/dates/stories/july/5/newsid_3856000/3856397.stm); retrieved 30.09.2012

<sup>1</sup> Adults media use and attitudes report 2012, Ofcom, <http://stakeholders.ofcom.org.uk/binaries/research/media-literacy/media-use-attitudes/adults-media-use-2012.pdf>; retrieved 25.07.2012

<sup>1</sup> Thussu, Daya Kishan, *News as Entertainment*. London: Sage, 2007.

<sup>1</sup> Postman, Neil, *Amusing Ourselves to Death: Public Discourse in the Age of Showbusiness*. New York: Viking, 1985.

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<sup>44</sup> Willis, Jim, *The Mind of a Journalist*. London: Sage, 2010.

<sup>45</sup> Turnock, Rob, *Interpreting Diana*. London: British Film Institute, 2000

<sup>39</sup> Turnock, Rob, *Interpreting Diana*. London: British Film Institute, 2000



- <sup>1</sup> Thussu, Daya 2007
- <sup>1</sup> Analysis taken place on primetime news shows on August 16<sup>th</sup>, 2012. Anderson Cooper 360 on CNN, Nightly News on NBC and the O'Reilly Factor on Fox.
- <sup>1</sup> NBC Nightly News, August 16<sup>th</sup>, 2012
- <sup>1</sup> NBC Nightly News, August 16<sup>th</sup>, 2012
- <sup>1</sup> NBC Nightly News, August 16<sup>th</sup>, 2012
- <sup>1</sup> The State of the News Media," Pew Project for Excellence in Journalism. 2009
- <sup>1</sup> O'Reilly Factor, Fox News, August 16<sup>th</sup>, 2012
- <sup>1</sup> [http://www.huffingtonpost.com/2011/11/28/chelsea-clinton-nbc-steve-capus-skeptics\\_n\\_1116186.html?ref=chelsea-clinton](http://www.huffingtonpost.com/2011/11/28/chelsea-clinton-nbc-steve-capus-skeptics_n_1116186.html?ref=chelsea-clinton), Chelsea Clinton At NBC: Steve Capus Defends Hiring; retrieved 25.08.2012
- <sup>1</sup> NBC Nightly News, August 16<sup>th</sup>, 2012
- <sup>1</sup> Postman, Neil, & Powers, Steve, *How to Watch TV News*. London: Penguin, 2008.
- <sup>1</sup> Postman, Neil, & Powers, Steve, *How to Watch TV News*. London: Penguin, 2008.
- <sup>1</sup> Bell, Martin, *Anchors away, my boys*. London: British Journalism Review, 2011.
- <sup>1</sup> Marshall, Penny, *Haiti and the Reporters Without Boundaries*. London: The Times, 2010.
- <sup>1</sup> Cooper, Anderson, *In the midst of looting chaos*. Retrieved from CNN: <http://ac360.blogs.cnn.com/2010/01/18/anderson-in-the-midst-of-looting-chaos> 2012, 01 03.
- <sup>1</sup> Marshall, Penny, *Haiti and the Reporters Without Boundaries*. London: The Times, 2010.
- <sup>1</sup> Marshall, Penny, *Haiti and the Reporters Without Boundaries*. London: The Times, 2010.
- <sup>1</sup> Marshall, Penny, *Haiti and the Reporters Without Boundaries*. London: The Times, 2010.
- <sup>1</sup> Jerney, Michael, in conversation with author, 19.01.12
- <sup>1</sup> Jerney, Michael, in conversation with author, 19.01.12
- <sup>1</sup> Marshall, Penny, *Haiti and the Reporters Without Boundaries*. London: The Times, 2010.
- <sup>1</sup> Cooper, Anderson, *Dispatches from the Edge*. New York: HarperCollins, 2006
- <sup>1</sup> Conversations with Marc David, Journalist MD, 26.08.12
- <sup>1</sup> Conversations with Marc David, Journalist MD, 26.08.12
- <sup>1</sup> Cooper, Anderson, The Fact is I'm Gay. Retrieved from <http://andrewsullivan.thedailybeast.com/2012/07/anderson-cooper-the-fact-is-im-gay.html>; retrieved 2012, 08, 15
- <sup>1</sup> Cooper, Anderson, The Fact is I'm Gay. Retrieved from <http://andrewsullivan.thedailybeast.com/2012/07/anderson-cooper-the-fact-is-im-gay.html>; retrieved 2012, 08, 15
- <sup>1</sup> Cooper, Anderson, Twitter, <http://twitter.com/andersoncooper>, retrieved 14.06.2012
- <sup>1</sup> [http://www.huffingtonpost.com/2012/05/23/anderson-cooper-human-barbie-sarah-burge\\_n\\_1538857.html](http://www.huffingtonpost.com/2012/05/23/anderson-cooper-human-barbie-sarah-burge_n_1538857.html), retrieved 25.08.2012
- <sup>1</sup> Boorstin, Daniel, *The Image: A Guide to Pseudo-Events in America*. New York: Vintage Press, 1961
- <sup>1</sup> Hollins, Chris, in conversation with the author, 12.01.2012
- <sup>1</sup> Hollins, Chris, in conversation with the author, 12.01.2012
- <sup>1</sup> Willis, Jim, *The Mind of a Journalist*. London: Sage, 2010. p.107
- <sup>1</sup> Willis, Jim, *The Mind of a Journalist*. London: Sage, 2010.
- <sup>1</sup> Turnock, Rob, *Interpreting Diana*. London: British Film Institute, 2000
- <sup>39</sup> Turnock, Rob, *Interpreting Diana*. London: British Film Institute, 2000

## Bibliography

BBC. (n.d.). *About BBC News*. Retrieved Jan 10, 2012, from BBC: [www.news.bbc.co.uk/aboutbbcnews/spl/hi/history/noflash/html/1950s.stm](http://www.news.bbc.co.uk/aboutbbcnews/spl/hi/history/noflash/html/1950s.stm)

Bell, Martin, *Anchors away, my boys*. London: British Journalism Review, 2011.

Boorstin, Daniel, *The Image: A Guide to Pseudo-Events in America*. New York: Vintage Press, 1961

Cooper, Anderson, *Dispatches from the Edge*. New York: HarperCollins, 2006

Cooper, Anderson, *In the midst of looting chaos*. Retrieved from CNN: <http://ac360.blogs.cnn.com/2010/01/18/anderson-in-the-midst-of-looting-chaos> 2012, 01 03.

Cooper, Anderson, The Fact is I'm Gay. Retrieved from <http://andrewsullivan.thedailybeast.com/2012/07/anderson-cooper-the-fact-is-im-gay.html>; retrieved 2012, 08, 15

<sup>1</sup> Cooper, Anderson, Twitter, <http://twitter.com/andersoncooper>, retrieved 2012, 06, 14

Ellis, John, *Visible Fictions: Cinema, Television, Video*. London: Routledge (1982.  
Marshall, Penny, *Haiti and the Reporters Without Boundaries*. London: The Times, 2010.

Morse, Margaret, *The Television News Personality and Credibility: Reflection on the News in Transition*. (T. Modleski, Ed.) Austin, Texas: Indiana University Press, 1986.

Postman, Neil &. Powers, Steve, *How to Watch TV News*. London: Penguin, 2008.

Postman, Neil, *Amusing Ourselves to Death: Public Discourse in the Age of Showbusiness*. New York: Viking, 1985.

Thussu, Daya Kishan *News as Entertainment*. London: Sage, 2007.

Turnock, Rob, *Interpreting Diana*. London: British Film Institute, 2000

Willis, Jim, *The Mind of a Journalist*. London: Sage, 2010.

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## Appendix 3

Jones S. (2016)' Disrupting the Narrative: finding the voice within immersive journalism'. *Journal of Media Practice* 18.3.

## Disrupting the Narrative: Immersive Journalism in Virtual Reality

### Abstract

*This paper conceptualizes immersive journalism, and discusses the implications of the technology for users who then get a first-hand experience of being at a news event through wearing a virtual reality headset. The paper surveys current approaches to 360-degree immersive journalism films that were produced by early-adopters in 2015, identifying the contrasting narrative forms and style of the stories. Focus group studies add new, significant understanding to the types of narratives that work and the impact that immersive storytelling has. The focus group is a study of 18-24 year olds in the UK who are being targeted by this new technology as a way for news broadcasters to reach a new audience. This first study into immersive journalism content produces a new understanding of the impact of the narratives. It identifies the value for news producers adopting this technology, whilst raising concerns over the production of filming 360-degrees. A framework is offered for further research studies into immersive technologies and storytelling in the field of news.*

### KEYWORDS

Immersive journalism; news production; virtual reality; 360-degree filming

### Introduction

In November 2015, the *New York Times* added a platform to their news production and output. They distributed more than one million cardboard virtual reality (VR) headsets to their subscribers, and launched an app that offered news stories told through 360-degree filming. The move prompted Wired Magazine to write that the *New York Times* had hooked a generation on VR (Wohlsen 2015). More news organisations, both online companies like RYOT and more traditional news providers such as ABC News (USA), have since experimented with 360 degree filming and have been producing work within virtual reality, as a way to diversify its audiences in a challenging news ecology. ABC's *Inside North Korea* have given viewers a chance to watch a short film about North Korea in a 360-degree film, with more than 50,000 views of the film on its YouTube site (as of March 2016). With the traditional linear narrative form of news being challenged by the technology, this new genre of storytelling needs a framework to ensure ethics and privacy codes are not compromised. It has taken time for promised benefits of virtual reality to become apparent, since the initial conception in the 1970's, and even earlier. In a headline written in 1992, Gaming World magazine promised, "Affordable VR by 1994" (Callaghan 2015). Despite some false starts, 2015 saw the development of VR technology in a way that has made it accessible to non-gaming communities. This included the well-publicised \$2 billion investment by Facebook chief executive Mark Zuckerberg in leading technology company Oculus Rift, and Google's investment of more than \$600 million in VR technology (Chafkin 2015; Manly 2015). The investment into head-mounted displays (HMD) and technology to view VR from a mobile device have furthered popularised VR and facilitated its development, permitting VR more visibility in the mainstream and, while still costly, enabling more access in the creative industries where we might expect to see it develop further through use and experimentation. Recent reports suggest that the VR market will be worth \$1.88 billion by 2020 (Merel 2015) and this is through expanding the sectors using the technology instead of relying solely on the gaming community.

Early adopters of the technology have seen advances in using virtual reality for training doctors for surgical procedures (Haluck and Krummel 2000), treating military personnel with post traumatic stress disorder (Rothbaum et al. 2001) and using VR games within education to increase engagement (Virvou and Katsionis 2008, Jones and Callaghan 2016). Such

developments demonstrate a diversification of the ways VR can be applied in a range of contexts. As the market diversifies from just being viewed as a gaming platform, VR and 360-degree filming as a form of immersive journalism is rapidly becoming a popular form of news production. Despite the advances in this new space, we have not stepped back to address the forms in which 360-degree stories are being produced. There have also been limited studies with focus groups to understand how the stories are being received and understood. Immersive journalism is an emerging field. With news consumption on smart-phones increasing and technology affording us the opportunity to tell news in new ways, it is a genre that needs studying to understand how stories are told and how the audience is responding. This paper will address the varying narrative forms of 360-degree immersive journalism during 2015 and then survey the understandings and limitations of the narratives that are being produced through testing with a student group of 18-24 year olds, who are being targeted as the future consumers of this medium (Deloitte 2016). It is a sample study, acknowledging that as VR is defined as individual experience where each person can experience a story in their own way, it cannot be an exact science. However, it offers an understanding of the production, constraints and potential impact of presenting content in this way.

### **The Landscape of Immersive Journalism**

As we saw with the growth trajectories of online journalism, mobile journalism and data journalism previously, the development of immersive journalism seeks to capture a seemingly elusive audience (Livingston 2004). Current research has demonstrated that this audience has a more flexible, mobile and arguably more participatory understanding of news values (Wahl-Jorgensen, Williams & Wardle 2010). Ofcom's News Consumption in the UK survey, for example, found consumption of news online through any device was considerably higher for those aged 16-24 (59%) than for over-55s (23%) (Ofcom 2015). The trend for news consumption on mobile devices is not slowing down and news organisations are having to respond to how 'the real-time world of news and events fits in your pocket' (Bell 2015). Mainstream media and new-media organisations have begun working to produce immersive journalism, which addresses the fragmented audience by offering content that is shared socially on mobiles, available instantaneously and is telling a story in a new way. With the development of technology that responds directly to this new audience, 2015 saw a rise in the number of mobile apps driven to supporting 360-degree immersive films.

By immersive journalism, we are referring to journalism that "elicits a connection, works against indifference and relies not on presentation, but on experience" (De la Pena 2010). One example of this is what is captured in 360-degree films where a camera is capturing the action all around you. The immersive qualities allow the user the opportunity to look where they want to in their own time. More recently this technology is available as a 'tilt and rotate' option on mobile devices using the gyroscope to pick up on motions to convert them into your perspective so you can look around a scene.

Much of what has held back more widespread application of 360-degree films in journalistic contexts is cost. While VR headsets have become more readily available, they are still far more expensive than mainstream consumption allows. However, the launch of Google Cardboard at a developer's conference in 2014 provided an opportunity for immersive journalism to reach larger audiences. Google Cardboard is a virtual reality headset designed for a mobile device. Constructed out of cardboard, it comes with lenses and a magnet that changes the view or makes actions within an experience. The development of these more basic approaches has meant that any 360-degree film or virtual reality content can be viewed through cardboard headsets.

Then in November 2015, *The New York Times* capitalised on the cardboard VR headset. In

conjunction with this step towards getting the world ‘hooked’ on VR viewing, they launched the NYT:VR app that allowed viewers to download and view 360-degree films. One example of this was a 10-minute film called *The Displaced* (dir.: Chris Milk 2015) created to tell the story of three children who had lost their homes due to war and conflict. The mobile app had more downloads in its first few days than any other *New York Times* app has had at launch; the average time spent within the app was 14.7 minutes; some 92 per cent of videos were viewed; and concurrently the videos began trending on social networks (Jaekel 2015). A Forrester Research study into the use of apps on smart-phones in June 2015 found that users engaged with news apps on average 11 minutes and 51 seconds per day (Perez 2015). Although this is total usage, and duration may be split amongst various news apps, these findings indicate that users of *The New York Times* app choose to spend longer within an immersive news experience.

By providing a low-cost solution to take VR to the masses, these early experiments in making the VR experience more accessible, through the form of 360-degree films, have shaped the development of these technologies in journalism more generally. Rather than small scale experimental stories that might have limited audience reach, Google Cardboard allows for journalists to explore and expand to a new, immersive and potentially powerful platform that will require them to develop new skills and new forms of storytelling (Jarvis 2008). It is unsurprising that Facebook, which bought Oculus Rift for \$2 billion, supports spherical videos. In 2015, there was a 12% increase in the number of UK based 18-24 year olds turning to Facebook to get their news content (Ofcom). It is clear that with this growth trajectory and the VR support, the opportunities for 360-degree immersive journalism could find its news outlet on the social network.

Immersive journalism is not a genre exclusive to 360-degree films or virtual reality. Historical applications of the term lend itself to the New Journalism movement and later as a response to infotainment to add entertainment values to some forms of broadcast news (Jones 2014). Immersive journalism can be broadly defined against traditional news values, where ‘good news’ is meant to be factual, objective and lacks emotional involvement (Meijer 2001). Instead it seeks to make the journalist a part of the story, so that involvement that is inherently subjective. The New Journalism movement of the 1960s and 1970 arose out of the features genre and prominently featured the journalist as part of the news story. They demonstrated an involvement in features and a conflicting storytelling style. The work was written in the first person narrative and showed the writer participating as well as observing, with the aim to write journalism that would read like a novel (Wolfe 1973).

This type of immersion, or literary, journalism shares characteristics with ‘involved’ journalism. The involved journalist gives an ‘objective’ description, but then goes beyond that to include something else: a personal resonance with the story from the journalists own personal life, for example (Wolfe 1973). This style of journalism can be understood as more intense, with journalists being focused on a group or subject for a long period of time to fully understand the story, in a similar way to the ethnographer (Bird 2005, Cramer and McDevitt 2004). Capote (1966), for example, spent five years researching the Clutter murders and humanising the killers Perry Smith and Dick Hickock for *In Cold Blood*. This work of involved journalism catapulted Capote to celebrity status. On publication, he “became a celebrity of the most amazing magnitude in the bargain” (Wolfe 1973, 40), which has significance for the impact that reporter involved stories can have on perception and development of profile and status in the public arena. Although self-reflexivity can aid the journalist in understanding the story that they are reporting on, the challenge for New Journalism has been managing the relationship that the audience has with the journalist, since the “egotistical presentation of the investigating self encourages an absorption in personality that is more akin to celebrity adulation” (Macdonald 2003, 75).

The critique of ‘the cult of personality’ is at the heart of the major concerns related to New Journalism. New Journalism exploits the narrative conventions of subjectivity and goes against the objective ideologies at the heart of news conventions. It gives the journalist a voice with the emphasis on experience, but this has led to accusations of journalists being self-indulgent in their storytelling (Manguel 1997) or of “stretching the truth” (Harbers and Broersma 2014). The concerns raised within this genre resonate with immersive journalism in 360-degree films where the narrative forms need to be analysed for value and the location of the reporter’s voice.

A further issue at stake has been wider social and cultural changes that have changed the nature of news consumption and news ecology: including pressures on time and space. Neveu (2014) identifies a need for narrative reporting as a way to save journalism, in a context where technology can lead to smaller newsrooms, there is a requirement for multi-skilled journalists, and the audience has become overwhelmed by the accessibility of news. In today’s journalistic ecology, there are “less opportunities for in-depth investigations, less time for experiencing the ‘flesh’, flavours and scenes of the news” (Neveu 2014, 535). Immersive Journalism combines objectivity through experience allowing an opportunity for a different type of storytelling and one that has longevity in a saturated news economy. I discuss examples below, before establishing how 360 degree films allow us to develop this field.

In Harbers and Broersma’s (2014) analysis of narrative journalism, they offer us two examples of subjective reporting through the work of journalists in conflict zones. Fisk, a reporter for *The Times* and *The Independent*, uses a “personal-engaged stance” through human stories to help convey the message he is presenting and, although subjective, it is argued his reportage follows a “traditional journalistic framework” (2014, 641). The other case, Dutch novelist Arnon Grunberg reflects openly on the situation and employs a narrative that demonstrates when there are limitations to his reporting. Because of the literary quality of his work, there have been questions raised over its validity as a piece of journalism. The two approaches to narrative storytelling are important when considering the validity and accuracy of what is presented. The literary approach is largely distinct to print forms of journalism and not an accepted practice in television news. Despite this it is worth noting that the trend for long-form literary journalism has been increasing as a response to the quick immediacy of news within digital spectrums (Greenberg 2015). It has also developed to include digital technologies with New York Times’ *Snowfall* as an example so we can see the possibility to include this form of technology (Jacobson et al 2015). With this field of study gaining resurgence once more, it is interesting to note the parallels for study and the common narratives, particularly with the distinction between the creation and the creator in both literary journalism and with the field of immersive journalism with (Tulloch 2014).

Eliciting emotions and bringing a personalised approach changes the narrative of television news and places the focus on the role of the journalists. Turnock (2000) argued that in the coverage of the death of Princess Diana, witnessing the journalists’ own emotions “may have legitimated the distressed and emotional responses of some viewers” (2000:19). Viewers would turn the television on to see the journalist as a trusted friend and gain comfort from being reassured and sharing the same experience. This kind of or high-impact stories is seen as more of a legitimate part of journalistic culture, post-9/11 (Tumber and Prentoulis 2003), despite it still being seen as part of the entertainment genre (Pantti 2010).

The focus of emotions in the narratives of immersive journalism, through filming 360 degrees, has been at the heart of discussions as the technology develops. The impact of 360 degree journalism work that has already been produced demonstrates the capacity of the genre to act as an ‘empathy-machine’ (Constine, 2015). Leading VR filmmaker Chris Milk has, for example, been using films to show how United Nations policy shapes people’s

everyday experience, creating what he believes to be the “ultimate empathy machine”. In his Ted talk (April 2015), Milk said that showing his work to the United Nations has meant that people are able “to feel empathy for people that are very different than us and worlds completely foreign from our own”. This develops the role of immersive journalism, reporter involvement and the movement of new journalism, as being a tool to generate empathy and connection with the story. In this article, I take this further by asking focus groups the questions about understanding the story and feeling a connection to different types of 360-degree stories to understand which ones elicit more empathy.

## **Methodology**

Having established the industry provision for immersive journalism, this paper looks at the types of stories being told through 360-degree filming, how they are being told and how the audience is responding to these. This produces an understanding of the impact and value of this emerging journalistic field. The argument is determined through an initial content analysis of immersive journalistic stories produced in 2015 and secondly, through a focus group to discuss the audience understanding of the narrative form. The landscape of journalism content has changed and is still changing. The notion of immersive journalism offers a new type of reporting that has been developed from other journalistic trends but in this form, it offers a new response to reaching new audiences. This trend is rooted in immersive experiences so an audience feels involved and connects more to a story. By conducting a content analysis and focus groups, we can understand the kind of content produced and what the impact is within this emerging field of practice.

A content analysis produces an understanding of the potential use and limitations of immersive journalism in content produced by what can be described as early adopters of the technology was conducted. Content selected for analysis was based on stories that are journalistic in nature with a focus on factual storytelling. Four platforms for production were selected as the leading providers for watching VR or 360-degree content and ones that were accessible to anyone with a smart-phone. The mobile apps analysed were VRSE, NY Times VR, Jaunt and RYOT. VRSE and Jaunt have been leading the way in producing 360-degree content. NY Times, as earlier discussed, became the first news organisation to send headsets to create a mobile app devoted to this content and RYOT exist as a platform for journalism and content relating to activism. Other content has been made by BBC, Wall Street Journal and independent journalists. Some of these are embedded within websites (BBC) or often behind a pay wall (Wall Street Journal). The content selected is accessible and situated where an audience would go to find such content.

The focus group study was devised to include participants that are being targeted by the immersive storytelling genre: the 18-24 year olds that Wired Magazine said *The New York Times* cardboard experiment had “made VR cool for a generation”. A trend report into the VR industry found that 71% of those born after 2000 (Gen-Z) will either get a headset themselves or ask a parent or guardian to buy one for them. This data suggests that the audience for immersive journalistic content will within this age bracket. It is also the group who routinely switch off from mainstream news and so news organisations are trying to find new ways to reach this fragmented audience (Ofcom 2105).

The participants fell within the 18-24 age bracket and were mixed gender, ethnicity and comprised of half UK students and half international students from across the world. They were selected randomly from students studying journalism at degree level, mainly at Coventry University, UK, where the research was taking place. All participants possessed a smart-phone that they frequently used to source news. In the group, they all experienced different narrative forms of immersive journalism. Samples ranged from *The New York Times*’ “The Displaced”, *Vice News*’ “Millions March”, *Sky News*’ “Migrant Crisis” and

*VRSE's* "Clouds over Sidra". During the focus group, they were asked to think about how the stories were presented as a form of journalism, the narrative of the pieces and the characters that were portrayed. The participants used a range of headset mounted devices with smart-phones, including Google Cardboard and the Homido HMD, which house any smart-phone. All produce a very similar field of vision with little difference to the viewing experience and all require headphones for a more immersive experience. There were eighteen participants who answered a range of questions following on from their experiences to understand better the narrative forms of immersive journalism. Although the sample is small, the aim of the study wasn't to generalise these findings. Instead, I was more interested in crafting an in-depth understanding of these young people's experiences of this form of journalism. As this is an emerging field and a new genre of journalistic storytelling, it is important to gain qualitative data that can help inform our understanding of what is working and what isn't. This combination of content analysis and qualitative data achieved from focus groups of target audiences, we can understand the impact of the story forms. This paper will now review the content before analysing the qualitative data to help us formulate an understanding of what is being produced with the early adopters of 360-degree filming.

### **Content Analysis**

A content analysis found 12 360-degree films embedded within a journalism discourse had been produced in 2015. The table listing the stories is included at the end of this paper. The number of films made by amateur film-makers or VR games/experiences was significantly higher. This survey focused on immersive journalism and analysed content from leading VR platforms: Jaunt VR, VRSE, RYOT and NYTimes VR. It is worth noting that the last is the only platform by a news organisation at this stage. Jaunt and VRSE are both supporting a range of VR content. RYOT exists as an online news platform that directs stories to causes and they have led the field for VR content in an immersive journalism documentary format. The BBC is researching into this field and produced an early immersive film on the refugee camp in Calais, but this study focuses on those accessible through VR players.

Out of the 12 stories that were produced for these platforms, seven were from traditional network broadcasters: ABC in the US, Sky News in the UK and the Associated Press. Digital-led news outlets including Vice News and RYOT all hold a presence within the VR content on the sites. The content has all been distributed sporadically throughout the year. There is no "appointment to view" television. This supports the argument that 360-degree content, which takes longer to produce and consequently is more feature-led, is driven by the story and not a media that has easy application to everyday stories. The durations of the experiences are also longer than those of an average news package, particularly that which is produced for an online audience. The average duration of a conventional news package is around 1.30 - 2mins where 360 content is usually around the 5-minute mark or the 10-minute mark. The average duration is 6 minutes, 39 seconds.

The duration of the films can be analysed in a number of different ways. Durations of broadcast news stories within television news average around 1.30mins/2.29mins (Winston 2002). Research links the brevity and significance of the story to length so a television story that is shorter is deemed as being less serious (Winston 2002). Do we then argue that immersive journalism, which is longer in length, should be deemed as more serious? Two factors can disrupt that perspective. Firstly, in the 360 film, you are expecting an audience to look around at all angles; it is not the one-position view of the traditional media. By its very nature, then, the 360 film takes significantly longer to absorb. Secondly, the costs and time it takes to produce these films mean that they need to be longer in length so that they are more cost effective. Studies looking at comfort when watching or becoming immersed in content within a VR headset have found the duration to be around the 10 minute mark (Smith) and so

this is where many of these stories are sitting with regard to duration.

The narrative form in VR is crucial. Without a clear narrative, “content fails to ignite and elicit lasting emotion” (Dolan and Perets 2016). In the 12 stories that were produced we can break down the narratives into two distinct categories, one which is reporter-led and one which is character-led.

Before discussing further, it is important to note the previous studies of virtual reality content show four narrative forms. This is for content that is interactive in design. In their study, published online by Medium on Dec 19, 2015, Devon Dolan and Michael Parets revealed four types of narratives based on the user’s experience within the virtual world. A user can exist either as an observer or a participant and this points towards how active they are in the experience. They develop this to categorise on the influence. Is the viewer actively making decisions and in control of the experience? This clearly defines the narrative forms within VR content that is engaging different roles. It fails to work when we are talking about 360 degree films of immersive journalism where uses of an active agent are limited.

		<b>EXISTENCE</b>	
		<i>OBSERVANT</i>	<i>PARTICIPANT</i>
<b>INFLUENCE</b>	<i>ACTIVE</i>	Observant Active	Participant Active
	<i>PASSIVE</i>	Observant Passive	Participant Active

Although the user is participating in a story and directing his or her own experience within it, the narrative is that of an observant. They cannot change how the story is told. In all content surveyed and currently produced, the use of 360 degree films don’t rely on an active user experience, aside from looking around the experience, and so we can deduce that 360 immersive journalism falls within the Observant Passive spectrum. Dolan and Perets’ (2016) research described this as being “relatable to traditional media where you do not exist in the world or influence the story”. The storyteller, or the journalist for our examples, retains complete control of the action and what is presented to the viewer (Dolan and Perets 2016). Going back to this study and in the context of immersive journalism, we can break this category down into three further narrative forms, based on content produced in 2015. These are social 360, reporter-led narratives and character-led narratives





We are beginning to see a rise in the number of Social 360 stories, which are simple 360 degree views of the action of a story. Since Facebook added support for the content in November 2015, there have been 20,000 films uploaded that can be viewed in 360 (Facebook 2015). These tend to be shared socially online and with the introduction of cameras like the Ricoh Theta S, (which uses self-stitching technology to produce a film that can be shared directly from a smart-phone), there is an increase in 360 films made by news organisations. They do not have the quality necessary for full immersive storytelling within a headset mounted displays but provide a good introduction to the technology to reach a larger audience. It helps to produce more immediate 360 views on stories happening on the day to help us add to the immediacy of the news value, but less as immersive journalism.

As an example, BBC's Radio 5Live uploaded their first 360 film on their Facebook page on January 7<sup>th</sup>, 2016. Within the first 48 hours, it had reached 13,664 people, with 4,300 views, which made it the 13<sup>th</sup> most viewed 5Live Facebook video. These social 360 films need to be short and simple with a clear and concise purpose. It needs to be something that you can view easily on your phone without the sound on. It lends itself to stories like the floods, of Times Square on New Year's Eve, or protests. Although categorized as a type of immersive journalism, a study of 'social 360' content will be researched and reported in a later paper.

In this current study of longer form immersive journalism, the focus is on the impact of immersive journalism in reporter-led narratives and character-led narratives. These can exist independently from any accompanying text and is where the journalist is determining the interviews, the structure, and the script. Of the 12 stories produced last year, the numbers of each are split down the middle. More traditional news organisations, Sky News and ABC, have produced immersive journalism that is led by the reporter. Organisations producing news content for digital consumption, like RYOT and VRSE's own company, have remained with narratives led by the character. The only exception is within Vice News' Millions March, which is led by correspondent Alice Speri. This story focuses on the thousands of protesters who gathered around Washington Square Park in New York in December 2014 to protest the killings of unarmed black people by police officers. The story has no strong character and so Speri navigates the protest to guide the viewer at the heart of the action. It is a 'guided news report' (Etherington 2015).

The reporter as a 'guide' is a key element to the reporter-led narratives, which develops previous research on the role of reporter involvement with ITV's Director of News and Current Affairs, Michael Jerney saying that the journalist is there to be a "trusted guide seen to be there, questioning authority, taking people to different places, but not at the centre of story" (Jones 2014). With the reporter-led narratives within immersive journalism, the reporter shows you the story and guides you where to look. Consequently there are fewer scenes in this narrative form and where the reporter is not present, there is a voiceover. Both narrative forms utilise text on screen to contextualize the story, conveying further information, a common practice in news production and not unique to immersive stories.

Within a character-led narrative, either one or three characters tell the story. Any more would lead to added complications and often the strength of these stories lies in the direct story of one person. News led by strong narrative forms, like this, has received attention in research with findings that "retention and comprehension can be improved" (Machill et al. 2007).

Questions regarding objectivity remain but if by assuming immersive journalism is another tool to convey a story, text links and the text enhancements can answer these criticisms.

Music featured in all character-led narratives and is seen as a technique to develop emotional reactions (Seidman 1981).

## **Focus study**

From the above content analysis, there are distinct narratives that have evolved within immersive journalism forms; reporter-led narratives and those led by characters or told in the first person. There was no clear preference for either narrative form, however the answers that were elicited helps us to determine the impact of immersive journalism. Those making a preference for a reporter-led narrative found value for it “still maintains focus on the story”, adding authenticity. When a reporter is viewed as being a “trusted friend” (Turnock 2000), there is a sense of comfort and credibility from having them present. From this we can understand that the traditional structures of news help to add authenticity to the story. Discussions involving the character-led narratives repeatedly revealed that it was “more engaging” and “the story flowed regardless of where you looked”. Despite the reporter adding authenticity, the use of primary sources telling the story, was said to add more value and authenticity.

Despite there being no clear preference for either narrative form, discussions focused on the weak aspects of the narrative revealed more caution to reporter-led immersive journalism. There were no other comments made to weaknesses in the narratives so the significance of this needs to be made. The group responded that, “I didn't really pay much attention to the reporter”, “Reporter led meant you can't explore as much. You find your own way in character led meaning you can potentially watch it over and over” and “I didn't feel as free as in the other ones”.

It is interesting to understand what that means for the impact of the reporter-led narrative form. Although the focus group revealed no preference, the weakness in immersive journalism focused on the inclusion of the reporter. The argument that technology allowing immersive journalism breaks down the barrier of the screen for an audience to become completely immersed (Jones 2015) is revoked when there is a reporter who becomes the barrier between the audience and the subject. It is only through using a character-led narrative that the viewer can become totally immersed.

Discussions concerning understanding of the story and the emotional connection were not decisive however, more than half of the respondents said they felt “more of a sense of atmosphere/emotion” to this form of storytelling. One referenced Vice News’ Millions March to say it “was powerful storytelling through ‘experience’ provided, not just words/narration” and also that it added “another dimension to and it immerses you into the story”. Three felt that it didn’t contribute any more understanding to the story.

One interesting response in the focused study, related to concentration and impact of immersive journalism. Research by entertainment company TiVo (2015) found that 99% of American audience’s multi-task whilst watching television. If you are watching immersive journalism, through a virtual reality headset, there are no options to do anything but immerse yourself. This will change if you are watching directly on a smart-phone, but tailoring experiences towards this technology, means you have more of an audience’s attention. The respondent stated:

“I felt like I was there with the reporter or the characters. I felt more involved in the story. There was no possibility of distractions like there is when you are watching the news (I can’t play on my tablet or phone while occasionally glancing up at the screen). I was fully in the story for the whole time and that meant the issues had my full attention. I think it also made it all feel much more real. There is a sense of disconnection caused by the traditional screen.”

The second illuminating response came in the form of personal space with one respondent commenting, “the only part I did not appreciate was the fact that the characters felt visually close and invading my personal space”. The nature of immersive storytelling means that you want to be able to reach out and touch what is around you and feel that you are in the heart of

the action. Personal space in virtual reality has long been discussed (Hall 1963; Bailenson et al. 2001; Wilcox et al. 2006) with research showing intrusion can cause significant negative reactions. This can be exploited to enhance the emotional connection and “evoke real audience discomfort when faced with a virtual ‘close-talker’” (Wilcox et al. 2006). It is also said to cause more discomfort when the close proximity is to people, rather than objects (Bailenson et al. 2001). The findings in the focus group backed up this research. Four of the participants felt discomfort about the invasion of personal space with comments including the “perceived closeness to people, some of which seemed to be staring straight at me” and discomfort “when people passed very close to the camera in Millions March”. Although when characters feel close needs monitoring, there is a sense that to become immersed in a story, especially when at the centre of a protest, you need viewers to be virtually close to the action to produce the immersive environment.

The fear of missing something was a repeated concern. For an audience used to watching what is presented on a screen with no options, it is difficult to get used to the autonomy you have in a virtual environment. Consequently, there is a fear that you will miss out on some action and not see something that is crucial to the story. For the immersive journalist producing the story, there are ways to prevent this, particularly through using sound effects, looking behind you at the door, for example, when you hear a key. The New York Times’ ‘The Displaced’, makes use of this with the “food drop shot”. You hear a plane flying so you instinctively look up. At that point, the plane flies overhead and drops sacks of aid. You can then see people running to collect the food. These techniques have to be utilised to overcome the audience’s fear of missing out.

The merit and value of immersive journalism in the context of 360-degree filming is still uncertain. Although the majority of the group was in agreement that it works as a journalistic tool, particularly to increase participation. It is another tool to diversify the audience for news. However, four in the group were unsure. Some thought that there needed to be more improvements, others thought that “where the market lies is still undefined”.

### **Further Questions**

As the technology increases and production of 360 degree films becomes more prevalent, the debate concerning immersive journalism is beginning. Future research will look at the idea behind Social 360 narratives and the value they add to the news ecology. If a quick look at Downing Street when the Prime Minister makes a speech is viewed by a larger audience, simply because it is shot in 360 and on Facebook, there is a newly engaged audience. This has to be a good thing if news is reaching a wider audience. How this idea of news production is consumed and understood needs to be studied.

There are further questions around the notion of empathy and connection to stories. Debates around ethics and privacy are also beginning that need further investigation.

### **Conclusion**

The development of immersive journalism becoming 360 degree films within virtual reality frameworks is redefining the approach to news production. This new form is a way to reach a disengaged audience and a response to a more fragmented audience, requiring media companies to customize their content or programming for this niche market (Kaye & Quinn 2010). Aside from the business of news, immersive journalism, offers the viewer the opportunity to become a reporter, to become immersed in a news event and make decisions about what they see and hear themselves. It gives them freedom and autonomy in their own news story. There is a fundamental shift in the production and viewing of immersive journalism in the framing of the story. The viewing experience is determined by the audience

and which way they decide to look or focus their attention. However, without interactivity in a narrative, as identified earlier, the narrative is still led by the reporter and the framing can be construed accordingly. This raises ethical questions, in the same way as traditional journalistic forms, in terms of selection of images and sound-bites to tell a story.

There are significant questions still to be answered but this research identifies the three types of immersive journalism being produced by news organisations producing a conceptual framework for further studies concerning ethics, privacy and empathy questions which are commonly raised when discussing 360-degree films. It sheds some light on what is working and raises questions regarding invasion of space and the strength of the narrative. The inclusion of text and the reporter guiding viewers can add authenticity but it can also act as a barrier to an audience becoming completely immersed.

The area of social 360 may appeal to a different kind of audience and increase the use of the technology making it more accessible to those without VR headsets. There needs to be further narrative experimentation. The current narrative forms have been defined and a framework set, which adds to the conceptual field of immersive journalism. The challenges now are for news organisations to begin examining other ways of telling their stories, particularly in the UK news organisations to capture disengaged audiences but not diversify the content so that it becomes less impactful.

## References

- Bailenson, Jeremy N., Jim Blascovich, Andrew C. Beall, and Jack M. Loomis. 2001. "Equilibrium theory revisited: Mutual gaze and personal space in virtual environments." *Presence* 10 (6) : 583-598.
- Bell, Emily. 2015. "Digital News Report." Reuters Institute of Journalism. Oxford. <http://www.digitalnewsreport.org/essays/2015/the-rise-of-mobile-and-social-news/>
- Callaghan, Ruth. 2015. "Viva the VRevolution." *Edith Magazine* (4), Edith Cowan University, January 20.
- Capote, Truman. 1965. *In Cold Blood: a true account of a multiple murder and its consequences*. New York: Random House.
- Chafkin, Max. 2015. "Why Facebook's \$2 Billion Bet on Oculus Rift Might One Day Connect Everyone on Earth." *Vanity Fair*, September. <http://www.vanityfair.com/news/2015/09/oculus-rift-mark-zuckerberg-cover-story-palmer-luckey>
- Constine, Josh. 2015. "Virtual Reality, The Empathy Machine." *TechCrunch*, February 1. <http://techcrunch.com/2015/02/01/what-it-feels-like/>
- De la Peña, Nonny, Peggy Weil, Joan Llobera, Elias Giannopoulos, Ausiàs Pomés, Bernhard Spanlang, Doron Friedman, Maria V. Sanchez-Vives, and Mel Slater. 2010. "Immersive journalism: immersive virtual reality for the first-person experience of news." *Presence: Teleoperators and Virtual Environments* 19 (4) : 291-301.
- Deloitte. 2016. "Technology Media and Telecommunications 2016". <http://www2.deloitte.com/content/dam/Deloitte/global/Documents/Technology-Media-Telecommunications/gx-tmt-prediction-2016-full-report.pdf>
- Etherington, Darrell. 2015. "Vice News Offers Immersive Report On The 'Millions March' Protest Using VR." *TechCrunch*, January 23. <http://techcrunch.com/2015/01/23/vice-news-offers-immersive-report-on-the-millions-march-protest-using-vr/>
- Facebook. 2016. "New Steps Toward the Future of Virtual Reality". <http://newsroom.fb.com/news/2016/02/new-steps-toward-the-future-of-virtual-reality/>
- Gluck, Marissa., & Roca, Meritxell. 2008. *The future of television: Advertising, technology and the pursuit of audiences*. Los Angeles: University of Southern California.
- Grand View Research. 2016. "Immersive Virtual Reality Market Worth \$1.88Bn By 2020." <http://www.grandviewresearch.com/press-release/global-immersive-virtual-reality-market>
- Susan Greenberg. 2012. "Slow journalism in the digital fast lane." In *Global Literary Journalism: Exploring the Journalistic Imagination*, edited by Keeble, Richard and Tulloch, John, 381-93. New York: Peter Lang.

- Harding, James. 2015. "Digital News Report". Reuters Institute of Journalism. Oxford.  
<http://www.digitalnewsreport.org/essays/2015/mind-the-gap/>
- Hall, Edward T. 1963. "A system for the notation of proxemic behavior." *American Anthropologist* 65 (5) : 1003-1026.
- Haluck, Randy S., and Krummel, Thomas M. 2000. "Computers and Virtual Reality for Surgical Education in the 21st Century." *Archives of Surgery* 135 (7) : 786-792.
- Harbers, Frank, and Marcel Broersma. 2014 "Between engagement and ironic ambiguity: mediating subjectivity in narrative journalism." *Journalism* (2014): 639-654.  
doi: 10.1177/1464884914523236
- Jacobson, Susan, Jacqueline Marino, and Robert E. Gutsche. 2015. "The digital animation of literary journalism." *Journalism*. doi: 10.1177/1464884914568079.
- Jaekel, Brielle. 2015. "NY Times' VR play is publisher's most successful app launch." *Mobile Marketer*. November 12.  
<http://www.mobilemarketer.com/cms/news/video/21676.html>
- Jarvis, Jeff. 2008. "The end of the story – as we know it." *The Guardian*. October 27.  
<http://www.theguardian.com/media/2008/oct/27/digitalmedia>
- Jones, Sarah. 2014. "Changing the Face of News: the Reporter as a Celebrity". In *Search for the Real: Authenticity and the Construction of Celebrity*, edited by Sepie, Andrew. Oxford: Inter-Disciplinary Press.
- Jones, Sarah. 2015. "Immersive Storytelling as a Learning Platform." Talk given at TedX, London. December 10.
- Jones, Sarah & Callaghan, Ruth. 2016. Immersive Journalism in Media Education. *Media Education Research Journal*.
- Kaye, Jeff, and Stephen Quinn. 2010. "Funding journalism in the digital age." *New York: Peter Lang*.
- Livingstone, Sonia. 2004. "The challenge of changing audiences : or, what is the researcher to do in the age of the internet?" [online]. London: LSE Research Online.
- Machill, Marcel, Sebastian Köhler, and Markus Waldhauser. 2007. "The Use of Narrative Structures in Television News An Experiment in Innovative Forms of Journalistic Presentation." *European Journal of Communication* 22 (2) : 185-205.
- Manly, Lorne. 2015. "A Virtual Reality Revolution, Coming to a Headset Near You." *New York Times*. November 12.  
[http://www.nytimes.com/2015/11/22/arts/a-virtual-reality-revolution-coming-to-a-headset-near-you.html?\\_r=0](http://www.nytimes.com/2015/11/22/arts/a-virtual-reality-revolution-coming-to-a-headset-near-you.html?_r=0)
- Macdonald, Myra. 2003. *Exploring Media Discourse*. London: Arnold.
- Manguel, Alberto. 1997. *Why are you telling me this?* Banff, Canada: Banff Centre Press.

Meijer, Irene Costera. 2001. "The public quality of popular journalism: Developing a normative framework." *Journalism Studies* 2 (2) : 189-205.

Merel, Tim. 2015. "Breaking Down Billion-Dollar AR/VR Investment In The Last 12 Months." *TechCrunch*. November 27.  
<http://techcrunch.com/2015/11/27/breaking-down-billion-dollar-arvr-investment-in-the-last-12-months/>

Milk, Chris. 2015. "How virtual reality can create the ultimate empathy machine". Talk given at Ted2015. March.

Neveu, Erik. 2014. "Revisiting narrative journalism as one of the futures of journalism." *Journalism Studies* 15 (5) : 533-542.

Ofcom. 2015. "News consumption in the UK".  
[http://stakeholders.ofcom.org.uk/binaries/research/tv-research/news/2015/News\\_consumption\\_in\\_the\\_UK\\_2015\\_report.pdf](http://stakeholders.ofcom.org.uk/binaries/research/tv-research/news/2015/News_consumption_in_the_UK_2015_report.pdf)

O'Sullivan, John & Heinonen, Ari. 2008. "Old Values, New Media". *Journalism Practice* 2 (3) : 357-371.

Pantti, Mervi. 2010. "The value of emotion: An examination of television journalists' notions on emotionality." *European Journal of Communication* 25 (2) : 168-181.

Perez, Sarah. 2015. "Consumers Spend 85% Of Time On Smartphones In Apps, But Only 5 Apps See Heavy Use". *TechCrunch*. June 22. <http://techcrunch.com/2015/06/22/consumers-spend-85-of-time-on-smartphones-in-apps-but-only-5-apps-see-heavy-use/>

Reinhard, Erik, and Heinrich Bulthoff. 2008. "Transactions on Applied Perception." *ACM Transactions on Applied Perception* 5 (2).

Rothbaum, Barbara O., Larry F. Hodges, David Ready, and Renato D. Alarcon. 2001. "Virtual reality exposure therapy for Vietnam veterans with posttraumatic stress disorder." *The Journal of Clinical Psychiatry* 62 (8) : 1-478.

Schudson, Michael. 1978. *Discovering the News: a social history of American newspapers*. New York: Basic Books.

Schudson, Michael. 2001. "The Objectivity Norm in American Journalism." *Journalism* 2 (2) : 149-170.

Seidman, Steven A. 1981. "On the Contributions of Music to Media Productions." *ECTJ* 29 (1): 49-61.

Smith, Will. 2015. "Stop Calling Google Cardboard's 360-Degree Videos 'VR'". *Wired Magazine*. November 16.

<http://www.wired.com/2015/11/360-video-isnt-virtual-reality/>

Tanak, Nour. 2015. "Interactive Cinema". MediaLabAmsterdam. [www.medialab.hva.nl](http://www.medialab.hva.nl)

Tivo. 2015. "Multitasking and Social Media TV Survey".

<http://pr.tivo.com/press-releases/distracted-but-still-watching-tivo-survey-finds-99-percent-of-viewers-are-multi-nasdaq-tivo-1226927>

Tuchman, Gaye. 1972. "Objectivity as strategic ritual: An examination of newsmen's notions of objectivity." *American Journal of Sociology* 660-679.

Tulloch, John. 2104. "Ethics, trust and the first person in the narration of long-form journalism." *Journalism* 15 (5) : 629-638. doi:1464884914523233.

Tumber, Howard, and Marina Prentoulis. 2003. "Journalists Under Fire: Subcultures, Objectivity and Emotional Literacy." *War and the Media: Reporting Conflict* 24 (7) : 215-230.

Turnock, Robert. 2000. *Interpreting Diana: Television Audiences and the Death of a Princess*. London: British Film Institute.

Virvou, Maria, and George Katsionis. 2008. "On the Usability and Likeability of Virtual Reality Games for Education: The case of VR-ENGAGE." *Computers & Education* 50 (1) : 154-178.

Wahl-Jorgensen, Karin. "Subjectivity and Story-telling in Journalism: Examining expressions of affect, judgement and appreciation in Pulitzer Prize-winning stories." *Journalism Studies* 14 (3) : 305-320.

Wahl-Jorgensen, Karin, Andrew Williams, and Claire Wardle. 2010. "Audience views on user-generated content: exploring the value of news from the bottom up." *Northern Lights: Film & Media Studies Yearbook* 8.1: 177-194.

Wilcox, Laurie M., Robert S. Allison, Samuel Elfassy, and Cynthia Grelik. 2006. "Personal space in virtual reality." *ACM Transactions on Applied Perception (TAP)* 3 (4) : 412-428.

Winston, Brian. 2002. "Towards Tabloidization? Glasgow Revisited, 1975-2001." *Journalism Studies*. 3 (1) : 5-20.

Wohlsen, Marcus. 2015. "Google Cardboard's New York Times Experiment Gave a Bunch of Kids Their First Glimpse of the Future". *Wired Magazine*. November 9.  
<http://www.wired.com/2015/11/google-cardboards-new-york-times-experiment-just-hooked-a-generation-on-vr/>

Wolfe, Tom. 1973. "Like a Novel." *The New Journalism* 23-68.



**Table**

VR PLAYER	COMPANY	DATE	TITLE	DURATION
VRSE	Gabo Arora & Chris Milk	1.09.15	Waves of Grace	9.54
	Gabo Arora & Chris Milk	23.01.15	Clouds of Sidra	8.34
	Vice News	23.01.15	Millions March NYC	8.24
NYT VR	New York Times	5.11.15	The Displaced	11.08
	New York Times	20.11.15	Vigils in Paris	5.12
JAUNT	ABC News	22.12.15	New York City Holiday Cheer	4.07
	ABC News	9.12.15	Inside North Korea	8.48
	Sky News	19.11.15	Migrant Crisis	4.06
	ABC News	16.09.15	Inside Syria	5.38
RYOT	RYOT	28.05.15	Nepal Earthquake Aftermath	4:02
	RYOT	11.12.15	Growing Up Girl: A Day in the Life of a Young Girl on the Border of Tanzania	4:20
	RYOT+ AP	6.11.15	Seeking Home	5:34
Table: Overview of immersive journalism and durations in 2015				

#### Appendix 4 a.

Jones, S and Dawkins, S. (2017) 'Contemplation in ChungKing: an immersive psychogeography journey through the heart of Hong Kong'. *Screenworks* Vol 7.

This comprises of the research statement and the practice. It can be viewed via Screenworks

<http://screenworks.org.uk/archive/volume-7/contemplations-in-chungking>

#### Appendix 4 b.

Rapid Passage Through Various Ambiences (Film).

Royal Television Society November 2016.

Some materials have been removed from this thesis due to Third Party Copyright. Pages where material has been removed are clearly marked in the electronic version. The unabridged version of the thesis can be viewed at the Lanchester Library, Coventry University

## **Contemplation in ChungKing: an immersive psychogeography journey through the heart of Hong Kong.**

**Author:** Sarah Jones & Steve Dawkins

**Format:** Spherical 360-degree film

**Duration:** 5 minutes 2 seconds

### **Research Statement**

#### **Criteria**

- How new technologies and new modes of production are changing the relationship between viewer and text.
- The implications of emerging media forms on film-making practice.
- How representations of space and place can be demonstrated in immersive film.

### **Viewing Conditions**

This work is intended as a spherical 360-degree film, designed for optimal viewing in a headset, cardboard or otherwise. The immersive film is viewed by moving your phone around the space or in a headset. It can also be watched in equi-rectangular format at the following link: <https://vimeo.com/194159424>.

### **Research Questions**

The research questions for this project are related to the sense of representation of place, especially busy city spaces, through use of immersive production and distribution technologies. This field currently has little research but is significant due to the increasing prevalence and affordability of 360-degree filmmaking tools. Our key research questions follow:

- What relationship can be established between elements of traditional documentary film-making and emerging forms of production?
- If experiential film enables a more immersive experience of place than traditional film, what implications might this have for representations of space and place?
- How can narratives be constructed in the film where an audience is not directed to observe and experience the events of a film in a particular order?

These research questions enable us to simultaneously interrogate how new technologies of

production push the boundaries of documentary practice and to provide a tentative framework for how experiential 360-degree film technologies can be used by producers and experiencers to adopt a different relationship to the documentary text.

The starting point for the project was to use 360-degree filmmaking technology to record a space that we were aware of but had not previously visited and hence *Contemplations in Chungking* was shot on a first visit to Chungking Mansions in 2016. Famous as the setting for Wong Kar-Wai's *Chungking Express* (1994), the Mansions is a seventeen-storey commercial and residential complex, described as "a world hub of low-end globalisation" (Mathews 2014: no page). On the ground floor, the building is a complex maze-like market forming the workplace to an estimated 4,000 people and receiving approximately 10,000 visitors per day. Hostels providing some of the cheapest accommodation in Hong Kong are situated on the upper floors of the Mansions.

In his *Theory of the Derive*, one of Debord's rules for a *dérive* was that "the average duration of a *dérive* is one day, considered as the time between two periods of sleep" (1958:no page). So, our original aim was to 'drift' around the location and shoot a 360-degree film quickly and reactively over one day to capture the *feel* of the place as first-time visitors and consider how we could most effectively communicate this to what we have termed the *experiencers*, as opposed to an audience or viewers, in a virtual environment.

Once we encountered the location, it quickly became clear that this was a more complex space than envisaged, with complicated ebbs and flows of capital, goods and people as well as visibly sophisticated relationships between the residents and visitors. Therefore, *Contemplations in Chungking* was produced over two days, rather than the originally intended single day. The resulting film captures the essence and rhythms of the environment by enabling an exploration of the culture and communities that exist within the world of the Mansions.

Through our mode of production this film begins to explore the new forms of experimental/observational documentary that might be possible with immersive filming techniques, specifically 360-degree filming for VR experiences. The Methods section below details this process.

## Context

*Contemplations in Chungking* is an immersive, experiential documentary.

Genna Terranova, former director of the Tribeca Film Festival, defines experiential storytelling as work in which "artists create wildly different adventures that go outside

traditional methods” (2016: no page). Considering this in relation to VR filmmaking specifically, the ‘narrative’ is largely determined by a viewer’s interactions with the environment and the direction that they choose to view and engage. This offers considerable new opportunities and challenges for established documentary practice in the sense that such “adventures” may no longer be determined solely by the artist, or producer, of the film but more by the experiencer.

Our film is intended for viewing through a Virtual Reality head-mounted display (HMD) rather than on a computer screen, although watching on a smartphone or scrolling through a spherical view allows a limited sense of immersion. It can also be viewed on the YouTube app with a smartphone placed into “VR” mode and viewed in a HMD such as Google Cardboard. Despite viewing context, there is a directorial influence in what has been filmed, how it has been filmed and the framing that takes place through the modes of speech used. Counter to this there is also a possibility that the viewer either misses the thing that they are ‘meant’ to be looking at, as they may be looking elsewhere, or deliberately chooses to ignore it.

This key difference requires us to introduce a new term to define such viewers: *experiencer*. A full discussion of audience studies is beyond the scope of this statement but during our research around the viewing experience of 360-degree films it became clear that referring to the ‘audience’ of a film implies a sense of mass, however active, and using the term ‘viewer’ implies an individuated viewing, both of which feel inadequate to describe the experience of immersive VR films. Work in this vein requires a different set of terms as the person experiencing the film, normally through a head-mounted display, is more actively exploring the film space in ways significantly different to traditional methods of viewing.

Consequently, an ‘experiencer’ is an individual viewing a shared film space in an exploratory manner.

The filmmakers are working on these notions through an emerging body of 360-degree filmmaking that will include the production of immersive, experiential documentary work and more sophisticated narrative film work along with explorations of the experience of viewing and specifically the addition of multi-sensory stimuli (primarily temperature and smell) at the moment of experiencing the film.

## **Methods**

To interrogate the idea of VR film enabling a more immersive experience of place than traditional film, the production process for this work was very journalistic, observational and

factual. It brought together the personal experience of the filmmakers entering a new space with its own cultural practices and interactions with residents inside the Mansions. The immersive process of situating ourselves within the environment, ‘drifting’ through the markets and the hostels while interacting with the visitors passing through and the residents enabled us to get a real sense of the *feel* of the place that is, hopefully, evident in the final film. This is formalised by the narrator’s voiceover.

The film takes the approach established by Woodhall (2015), especially the notion that the *dérive* should be an embodied movement and informed aimlessness. Drawing on the ideas of Debord, he refers to it as “walking at its most political and playful”. This exploration of the environment and existing communities allows for representation of, and experienter reflection on, the complex social and political conditions that face the immigrant refugees living in Chungking as well as the visitors, however superficial this may be.

The film also draws on methodology demonstrated in Patrick Keiller’s films. Keiller’s practice uses the exploration of chance encounters within locations to reflect on wider global themes. During this approach, unstructured interviews with community members gave insights into their life and their struggles which allows for an individual voice to allude to the more complex power relationships outside the closed environments of the Mansions. The realities of being a refugee in Hong Kong; immigration, unemployment, constraints in communities were evident themes and the significance of these chance encounters enabled a form of narrative, however loose and unstructured, that is *representative* of the environment. The subjects offer a sense of an insider looking out while the narrator’s voiceover provides the exploration of the outsider looking in. A large focus within Keiller’s work is the exploration of contrasts “between the familiarity of old city fabric, the strangeness of the past, and the newness of present-day experience” (Keiler 2003) which is used similarly to stimulate the sense of narrative within *Contemplations in Chungking*. Through this approach contrasts between the ambiances and activities within private rooms, hostels and shops in the Mansions are open to the *experienter*. There are established stable living spaces of the hostels as opposed to fluid, dynamic and ever-changing spaces of the market.

The experiences within Chungking Mansions were chaotic and confusing. There was a lot of noise, a lot of jostling and a lack of sense of time and place. Creating this feeling within an experiential film meant playing with the technology and breaking established filmmaking conventions. This lends itself to a perspective of experimental filmmaking as pushing the boundaries of mainstream filmmaking.

One method of achieving this disorientation was through identifiable stitch lines. This film

was made using a 360-degree rig, consisting of two back-to-back cameras. Images from the two cameras were then stitched together to form one larger spherical image. This set up creates a visible stitch line at times, especially when people get closer to the cameras. As in much experimental film work, this foregrounding of production process remained in the final cut to add a sense of unease to the audience rather than being rectified in post-production. At times, you can see people appearing, almost ghost-like, as they move between the camera stitch lines which gives this sense of uneasiness and could play on the experience of being within the environment.

Another technique to create disorientation was our positioning of the camera and people in relation to it. Earlier research (Jones 2016) identifies the invasion of personal space as a concern for audiences within virtual environments. If people get closer than one meter to the camera it feels as though that they are too close, creating a sense of unease. This was then used as a way to enhance the experience. In one scene, a man walks past the cameras, takes a second look at them and then comes back to stand close by, peering down the lens – this proximity to the camera means that he takes up 85% of the field of view. When viewed within a HMD, the intensity of this is heightened, startling the experiencer and perhaps making them feel uneasy as if the man were standing very close to them.

Our initial idea of the *dérive* was maintained to a small extent by playing with a tracking shot around the Mansions. In a spherical film, this can sometime elicit nausea in the experiencer but we decided it was the best way to capture a sense of exploration, space and place most authentic to capturing this environment. The camera operator appears in the film during this shot, which adds to this sense of an experiencer being carried through the environment in an unusual viewing position. It is an unreal experience of a real place.

## Outcomes

To explore the relationships that can be established between elements of traditional documentary filmmaking and emerging forms of production we used 360-degree cameras but added two of key elements of traditional documentary during post-production to see how they functioned together.

Corner identifies the Expository Mode and Evidential Mode 2: Testimony (1996:27-30) as two classic ‘modalities’ of documentary speech. *Contemplations in Chungking* uses both in a relatively traditional manner as the ‘voice of God’ of the narrator is supplemented by the testimony of two of the residents of the Mansions. This provides some sense of narrative structure during what is essentially an observational piece. The narrator is not seen, or at least

not recognizable in the film and their spoken words do not have direct connection to the visuals. Instead these voices act as more of a reflection and detail the thoughts of the subjects to add colour to the experience. This brings a more experimental filmmaking technique to a traditional narrative approach.

The narration and testimony functions paradoxically by simultaneously expanding our sense of space whilst also limiting it. As voices and images are not synced, we allow the experiencer a sense of freedom to explore. The voices allude to the complexities of the social relationships inside and outside the Mansions but the visuals seem to represent an ‘informed aimlessness’ as suggested by Woodhall (2015). The voiceover limits the viewing experience by structuring the ‘narrative’ but the experiencer can choose to ignore this structure creating a level of agency not possible in traditional documentary. If the experiencer chooses to ignore the provided narrative, they may have a better sense of the space and the physicality but will possibly miss the power relationships alluded to in the narration. By not making the subjects visible we have made them invisible, effectively air-brushing them out of the film in favor of the agency of the experiencer. This film experiments with these ideas and future works might continue to explore how such complexities are presented.

Another outcome of our field research was a realization that, as per more traditional filmmaking, our shot selection was important in highlighting and exaggerating some of the implicit power relationships that exist as outsiders entering the space of the Mansions. For example, the point of view of the tracking shot which elicited a feeling of being carried around the environment for an experiencer. This is an unnatural feeling so breaks the presence that an immersive VR film usually attempts to achieve.

## **Future Work**

This project attempted to understand how traditional filmmaking techniques might be adapted for immersive VR filmmaking and more importantly what new techniques may need to be developed when using emerging technologies of production and distribution. Traditional ideas toward framing and narrative must be challenged to construct a different type of film where an audience is not directed to observe and experience the events of a film in order but is free to experience whatever aspects they choose to engage. This has a profound impact for virtual filmmaking. In this film for example different elements such as narrative structure, shot composition, voiceover, testimony and the final edit – function in an explicitly different manner to traditional documentary form. Essentially, the film disorients rather than orients and cannot “speak for itself” in a way that a more linear, structured film would.



This is profoundly exciting for filmmakers and other practitioners working with immersive VR technology. It requires an awareness of filmmaking contexts, histories and practices but also preparation to invent, explore, play and fail at new practices to properly understand the possibilities and limitations of emerging technologies and modes of experiencing. We found for instance that experiencing this film through a HMD can lead to an increased sense of immersivity but also act as a distancing technology, reducing the sense of being in a specific place. So, in further field research related to this film we found that increased levels of immersivity may require other sensory input, such as heat and smell (Jones and Dawkins, forthcoming).

## **Dissemination**

This work was self-funded as a research study to identify new forms of media practice that combine traditional documentary film with emerging technologies.

Research papers based on this work, along with other practice pieces, are currently being submitted to festivals and academic conferences that explore new technologies, practices and ideas about society. It has been accepted at:

- The International ARVR conference in Manchester (February 2017)
- International Conference on VR in Hong Kong (May 2017)

The work was also screened as part of the RTS Virtual Reality Showcase in London, November 2016.

## **Additional Information**

If anyone is interested in further investigating this emerging area or any of the issues raised in this piece, we would be more than happy to work together on this.

## **References**

Clarke, D (2007) The City of the Future revisited or, the lost world of Patrick Keiller, in *Transactions of the Institute of British Geographers*, January 2007, Vol.32(1), pp.29-45

Corner, J. (1996) *The Art of Record: A Critical Introduction to Documentary*. Manchester, Manchester University Press.

Debord, G. (1958) *The Theory of the Derive*. Accessed at:

<http://www.bopsecrets.org/SI/2.derive.htm>. Last accessed: 27/11/16 at 15.05

Debord G (1996) Theory of the *dérive* in Andreotti L and Costa X eds. *Theory of the dérive and other Situationist writings on the city* Museu d'Art Contemporani de Barcelona/ACTAR, Barcelona 22–7

Keiller, P. (2003) *The City of the Future* City 7 376–86

Matthews, G. (2014) Accessed at: <http://travel.cnn.com/hong-kong/life/inside-chungking-mansions-expert-gordon-mathews-098440/>. Last accessed: 2/2/16 at 12.10

Terranova, G. (2016) <https://tribecafilm.com/stories/tribeca-film-festival-2016-innovation-storyscapes-def-con-mr-robot-virtual-reality>, Last accessed 18.11.16

Woodhall, A. (2015) <http://reframe.sussex.ac.uk/wp-content/uploads/2015/03/Some-methodologies-philosophy-for-psychogeography-practice-CLHLWR.pdf> Last accessed 1.12.16

## Appendix 5

Jones, S and Dawkins, S. 2017. The Sensorama Revisited: Evaluating the application of multi-sensory input on the sense of presence in 360-degree immersive film in virtual reality. In *Virtual Reality*, Springer. October 2017.

# **The Sensorama Revisited: Evaluating the application of multi-sensory input on the sense of presence in 360-degree immersive film in virtual reality.**

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## **Abstract**

It has been suggested that 360-degree immersive film viewed in virtual environments, does not allow for a sense of presence owing to the lack of interactivity, agency and realism. This paper outlines the findings of a research project to evaluate how such a sense of presence can be enabled through the introduction of multi-sensory input to the viewing experience.

Using an original 360-degree film that was shot in Hong Kong's Chungking Mansions as a basis for research, this paper interrogates Ryan's assertion that Virtual Reality (VR) that combines interactivity, immersion and narrativity is an example of the "total art" that VR producers need to aspire to. By adding changes in heat and scent to the viewing experience, the extent to which those sensory stimuli, which would not normally be part of a viewing experience, lead to an increased feeling of presence is evaluated. In doing so, we suggest that the viewing experience may not need all three elements of total art to be equivalent in order for a meaningful viewing experience to occur.

**Keywords:** Presence; 360-degree film; multi-sensory; virtual reality

## Introduction

With the emergence of affordable and accessible VR viewing technology and spherical cameras, there has been a growing move towards the production of 360-degree film that can be argued to provide a more immersive, embodied experience of moving images than 2D film (Jones, 2016, de la Pena *et al.*, 2010). This has led some to define VR as being the "ultimate empathy generator" (De La Pena *et al.*, 2010), with the creator of one innovative example of a 360-degree documentary, *Clouds Over Sidra* (2015), describing the film as an "empathy machine" (Milk, 2015). For storytellers, focusing on stories that build a stronger connection between the audience and the subject could, potentially at least, lead to a significantly different relationship between the audience and the text.

One of the main concerns for VR filmmakers is in maximizing the experience in order to sustain this connection and so this research starts with a deceptively simple question: does adding multi-sensory input to the viewing experience enhance the sense of presence in 360-degree film and, if so, to what extent?

It is clear that, on first experiencing 360-degree film, there is a 'wow' moment and a sense of wonder because this experience is profoundly different to viewing in a traditional flat manner. However, even on a second experience, this wears off and some of the inadequacies of the technology begin to be apparent. One reason for this might be that current technologies of production, or the way they have been used, mean that interaction and agency is limited in 360-degree film (Smith, 2015). There are also wider concerns over audience compassion fatigue within media (Höijer, 2004, Nikunen, 2016) that consequently suggest the limitations of VR and 360-degree film to sustain the emotional impact within immersive storytelling.

The challenge of creating and maintaining presence in the virtual world in order to enable maximum engagement is widely acknowledged as being the goal for VR creators. As Pimental and Teixeira noted during the first wave of VR in the 1990s:

the question isn't whether the created world is as real as the physical world, but whether the created world is real enough for you to suspend your disbelief for a period of time. (Pimentel and Teixeira, 1993).

Lombard and Ditton (1997) describe presence as “the illusion that a mediated experience is not mediated”. Creating a 360-degree filmed experience for immersion that with is indistinguishable from reality is challenging when the user is not actively involved in the story. Ryan’s concept of “total art” (2015) suggests that such a simple suspension of disbelief is not enough as that is what many existing forms of media already enable. VR has to aspire to total art in order to differentiate itself. Although 360-degree gaming appears to offer Ryan’s three pre-requisites for total art, 360-degree film currently does not allow for the interactivity and infinite worlds that VR needs to create this total sense of presence.

This paper analyses that central predicament. Using an original film, *'Rapid Passage through Various Ambiences'* (2016), as a basis for new research, to create the experience of being within the Chungking Mansions in Hong Kong. It adds in a range of sensory stimuli to evaluate the correlation between presence and cross-modal work. Through interviews with participants, the layers of immersion are analysed to understand the impact of sensory experiences to create presence for the user within 360-degree film.

#### Literature Review

Despite being established as an emerging technology as far back as the 1950s with Heilig's Sensorama and the "Experience Theatre", the re-emergence and accessibility of VR since 2014 means that it has established itself as a growing medium for storytelling. Much has been written about CGI within the virtual world and its applications across industries including health (Hsu *et al.*, 2013) and education (Huang *et al.*, 2010) but the inclusion of the more accessible spherical narrative film in these studies is limited. There are early academic studies into spherical panorama still images which demonstrated that they could offer a “proper point of view”, as Barker’s 1787 patent suggests. Uricchio (2011) argued that Barker’s work on the panorama was one of the earliest ideas that suggested the immersive opportunities of virtual reality within the still image and that it produces a “second order reality” (Otto, 2007) highlighting that film imagery could offer presence but there have been limited studies since. From this, we can deduce that the opportunities for 360-degree film can enable us to place someone in a virtual environment and making the user “feel as if really on the very spot” (Uricchio, 2011).

The aim of VR to transport you to another time and place has been well documented but the scope to extend this to film-making and immersive storytelling fails due to the lack of definition and agency that often exists within this medium. The concept of VR as a “total art” can give our best understanding of where the potential for 360-degree film lies. Ryan (2015) defines total art as being characterised by three main elements: narrativity, immersion and interactivity. For her, total art could be likened to art forms, such as the opera, where a state of immersion capture the different sensory experiences that are able to transport the audience to another time and place. Her argument is that VR should go a few steps further than the previous total art form of opera, by combining sound, graphics, text (spoken or written), movement (both by the interactor and the objects within the virtual environment), olfactory effects, and haptic sensations” (1997: np). It is at this point that this happens that we can begin to define VR as total art.

Examples of VR as total art are clear where the combination of narrativity, immersion and interactivity gives the sense of presence in the virtual environment. By presence, we follow Pimentel and Texeira’s (1993) definition of creating an environment that enables the experiencer to suspend *all* belief. Lombard and Ditton (1997) recognised that in a virtual environment, the user would be aware of using a head-mounted display but still, “to some

degree, her perceptions overlook that knowledge and objects, events, entities, and environments are perceived as if the technology was not involved in the experience”. Presence is the single defining characteristic of virtual reality and defines the moment that the mind tricks the body into feeling that it is somewhere else. Ideas of presence have long been studied within neuroscience (Reiner, 2011).

Content analysis of interactive virtual reality content carried out by Dolan and Parets (2015) identified four narrative relationships within virtual experiences. In their study, they isolated four types of possibility based on the user’s experience and the influence that they can exert on the narrative. A user can exist either as an observer or a participant depending upon how active they are in the experience. They develop this to categorise the influence, identifying when the viewer is actively making decisions and in control of the experience. When we apply this to 360-degree narrative film, actions are limited within the virtual environment. A narrative is often prescribed by the director and although a user can experience the environment as they choose, they are not free to make the decision to go to another space and consequently the experience is that of a participant. Dolan and Parets’ research described this as being “relatable to traditional media where you do not exist in the world or influence the story” (2016). The storyteller retains complete control of the action and what is presented to the viewer.

		EXISTENCE	
		OBSERVANT	PARTICIPANT
INFLUENCE	ACTIVE	Observant Active	Participant Active
	PASSIVE	Observant Passive	Participant Active

VR has long focused on the idea of the body. Fuchs *et al.* identified the idea of VR as one that allowed the subject “to remove himself from physical reality in order to virtually change the time, place and or type of interaction” (2006:7). Through the combination of immersion and interactivity with multimodal experiences, we can see how the body can be transformed to a virtual being. Concepts of the virtual body and technological embodiment have long been established within film, theatre and art research (Featherstone and Burrows, 1996, Bouko, 2011). Studies in theatre allow research into self-representation to cross over into mixed media formats, which can then be applied to immersive film. To achieve a sense of virtual embodiment, Bouko suggests that the weighting of the self needs to be lessened to create a new virtual body. By applying this idea to immersive film, we can develop the sensory experiences in a way that that they can simulate a new state of presence. The importance of the bodily experience is clear within the literature of one that is intertwined with the representation of the virtual (Bouko, 2011).

The idea of the virtual embodiment is magnified when we add the application of non-visual interfaces. The research findings develop a new idea concerning subjective body ownership illusion (Bergstrom *et al.*, 2016) that show that immersive virtual reality with multi-sensory experiences, can replicate the subjective, physiological and cognitive effects of the body in a virtual world. It explores the extent to film which film and moving image material can be, and needs to be, supplemented by other sensory experiences – smell, heat, touch – to be fully immersive and explores the extent to which actual knowledge of the space in the film enabled

a more fully-embodied experience. Friedman *et al.* studied the notion of time travel in the virtual world concluding that if a sense of presence can be achieved, then a user can change their own perceptions of events and have a sense of body ownership and agency over the virtual body (Friedman *et al.*, 2014).

The nature of immersive storytelling means that you want to be able to reach out and touch what is around you and feel that you are in the heart of the action. Personal space in virtual reality has long been discussed (Hall, 1963, Bailenson *et al.*, 2001; Wilcox *et al.* 2006) with research showing intrusion can cause significant negative reactions. This can be exploited to enhance the emotional connection and “evoke real audience discomfort when faced with a virtual ‘closetalker’ (Wilcox *et al.*, 2006). It is also said to cause more discomfort when the close proximity is to people, rather than objects (Bailenson *et al.*, 2001).

Studies in cross-modal work usually focus on haptics and are limited to touch. The importance of olfactory stimuli have been identified as adding presence within healthcare with Krueger (1996) suggesting that the development of virtual surgical training systems would be limited until odors were present in the environment. Heat lamps were used within the University of Virginia VR group to replicate the environment of a fire-breathing dragon so that you would feel the heat sensitivities on your skin. Evaluations of these multimodalities are limited in literature, however, the value to adding presence has been recognised in a number of studies. Munyan *et al* (2016) found that the more senses that were added, the greater the level of presence would be. This reflected on the use of presence connected to memory of the virtual environment and focused on olfactory stimuli. In an earlier 1999 study that surveyed 322 participants on the effects of a tactile, olfactory, audio and visual cues in relation to memory and objects in the virtual world, it was clear that increasing modalities enhanced both presence and memory (Dinh *et al.*, 1999). The depth of the visual didn't have an impact on presence but the findings pointed to "the more sensory cues that were added, the greater the sense of presence".

These studies have all been carried out in CGI virtual environments. By using these ideas to create a multi-sensory experience, the application of non-visual interfaces can be added to test the layers of immersion and use techniques to disrupt the experience of being in the virtual environment within a 360-degree film.

#### Methodology

There is currently a gap in literature concerning 360-degree films and their contribution to immersive technologies and virtual reality. With the current limitations that do not allow 360-degree to achieve total art status, this research fills that gap by exploring the extent to which the experience of 360-degree film can be enhanced by the addition of multi-sensory input into the experience. In doing so, it explores how the sense of presence and immersion can be enhanced and attempts to discover whether, if interactivity is currently not possible in 360-degree narrative film, such an enhanced sense of presence moves it closer towards Ryan's notion of total art.

An experimental 360-degree film, entitled *Rapid Passage through Various Ambiances*, was produced around the Chungking Mansions in Hong Kong in June 2016. Famous as the setting for Wong Kar-Wai's *Chungking Express* (1994), the Mansions is a seventeen storey commercial and residential complex, described as "a world hub of low-end globalisation" (Mathews, 2014). On the ground floor, the building is a complex maze of touts, and tourists that is home to an estimated 4,000 people and is visited by approximately 10,000 people each day. Hostels, providing some of the cheapest accommodation in Hong Kong, are situated on the upper floors of the Mansions.

The title of the film is lifted directly from Guy Debord's definition of the *dérive*: a mode of walking that emphasises curiosity, drifting, exploration and wonder (Debord, 1996). The film was shot over a two-day filming period embracing the concept of 'drifting' and with no pre-production deliberately to capture the chaos of the activity and the diverse communities that make up the Mansions. The film was intended to be experiential; it was directed to capture the essence of the experience of being there. The intention of the editing was to break newly-established filming conventions for 360-degree film - stitch lines from the cameras are visible, camera operators are in shot, and characters break the personal space filming line – in order to create the sense of uneasiness that a first-time visitor to the Mansions may feel (fig. 1)



**Fig 1.** A screenshot from *Rapid Passage through Various Ambiences* (2016) with the invasion of personal space to create the experience of uneasiness.

On the first viewing of the film in a head-mounted display (HMD), it was clear that although there was a level of immersion that enabled the viewer to have the 'wow moment' and to start to understand what it was like to be situated in the film world, there was no sense of the chaos and confusion and bodily sensations that replicated the physical experience of being in the real environment. The film felt 'empty'.

The aim of this research project is to examine whether a 360-degree film, such as *Rapid Passage Through Various Ambiences*, needs multiple layers of non-visual interfaces to create a more "total art" immersive experience and consequently, presence. The evaluation provides an understanding of the extent in which the experience of immersion might influence experiences within a virtual world. In short, what needs to be 'added' to the film itself to create a more totally-immersive experience and if such an experience is, indeed, possible.



**Fig 2.** The viewing tent

In this exploratory study, twenty participants of mixed genders, ages and ethnicities watched the film on a HMD through a mobile device. The participants were selected randomly through a call out to staff and students located within the University, ensuring a diverse pool of respondents. The testing occurred while in the controlled space of a tent in a room with no



other external stimuli. The participants put on the HMD outside the tent and were then led into it.

- The first viewing was a simple view with a HMD.
- The second viewing, approximately one week after the first, added in 'layers of immersion' at the start of the experience. A temperature-controlled environment was created so that users would feel the heat intensities of being in the environment and the blast of a fan as they moved through the market and smells appropriate to the market environment were introduced.



**Fig 3.** Testing *Rapid Passage Through Various Ambiences* (2016)

Immediately after viewing, participants were asked to fill in a form rating a series of statements to get them to reflect upon the experience and to focus in on the areas being examined in the research. This was followed by a semi-structured interview with each participant which was designed to establish their understanding of the experience of the space and how immersed they felt within the virtual environment. The framework for interviews with audiences was developed from previous studies around VR examining the levels of immersion and understanding of stories, primarily questions regarding presence, focus on place, illusion, plausibility and co-presence (Banakou *et al.*, 2013).

The statements that participants rated were as follows:

1. I had the sensation of being in Chungking
2. There were times when Chungking was more real for me than where I was watching the film
3. I felt like I could respond to the people as if they were real people.
4. Even though the virtual body wasn't me, I had the sensation that I was there.
5. I felt that the virtual body was someone else.
6. I felt like I was moving around Chungking.
7. I felt immersed in the environment.
8. My body responded to the environment.
9. I was lost in the environment.
10. I felt like I could interact with the environment and the people.
11. My body was interacting with the environment.
12. I could choose my experience in ChungKing.

Once focussed, the participants were immediately interviewed. The questions for each interview related to the areas on the rating form and were as follows:

Interview 1

Interview 2

1. **Have you ever seen a VR film before? How did you feel on first watching one?**
  2. **When watching this film, did you forget that you were in a tent? How long did it take you to forget? If you didn't forget, what was it that made you not forget?**
  3. **Describe the sensation of being in the place? Did it feel like it was your body there? Why? If not, why not?**
  4. **Describe how you felt about the people in the film. Who did you identify with most and why? Were there moments when you felt uncomfortable? Why?**
  5. **Did it feel like you were moving around Chungking? Did you feel active or passive in that movement? Why? Did you feel like you could interact with the environment? Why/why not?**
  6. **Did you feel 'immersed' in the environment? Did you feel any bodily sensations (fear etc.)?**
1. Sum up, if you can, how you felt the first time that you saw the film.
  2. Describe how the second viewing felt different (positive or negative)? How *significantly* different did it feel and why?
  3. Describe the sensation of being in Chungking with the external stimuli (smell/heat)? Did it feel *more* like it was your body there than the first viewing? Why? If not, why not?
  4. Did:
    - the smells make a difference to the viewing experience? Describe what that difference was and how significant it was.
    - the heat make a difference to the viewing experience? Describe what that difference was and how significant it was
  5. Did the external stimuli have an effect on how you felt about your interaction with the environment? Did it affect how active or passive you felt? Why?

**What was it, specifically, that made you feel that?**

**7. Do you have any other observations about the experience of watching the film?**

6. Did the external stimuli make you feel more 'immersed' in the environment than the first viewing? Why/why not?

7. Did the external stimuli have an effect on any bodily sensations you felt (fear etc.)?

8. What elements do you think could to be added to VR film to take it up to the next level of immersivity or embodiment? Real-time body parts (such as own hands)

9. Do you have any other observations about the experience of watching the film with the external stimuli?

## Findings

The interviews took place directly after the experience. They followed the same structure focusing on initial reactions, the different sensory experiences, interaction in the environment, presence and embodiment.

The initial response to being inside an environment that added in thermoceptive (heat) and olfactory (smell) stimuli was that it created a more immersive experience. Previous studies (Ischer et al., 2014) indicated the importance in setting the right environment to carry out experiments in presence where standard laboratories rarely replicated the "complexity of real world experiences". By replicating the correct environment, participants said they felt "significantly more immersed" when there was sensory stimuli;

"I got into the tent and straight away I could smell the different smells and the heat that was coming into the tent as well, it made it feel a lot more realistic that I was there."

There was a varied response to the addition of olfactory stimuli. Previous literature has recognised its impact on presence and memory and, although it enhanced presence, the smells were not distinct enough to elicit full immersion. For this study, it was not possible to add a range of different smells at different times in the experience. More sophisticated technology is

needed to do this, which will be the focus of a further study. Some participants said the smells seemed to stabilise in the experience because there wasn't a range of smells that were linked to the scenes. For example, two scenes in the film showed laundry and rubbish/sewers. Most participants said they wanted to be able to smell these. However the variety of smells in the market scenes, which dominate the film, could be said to have a small impact on presence.

"When you are walking through the streets, there's all the different parts of the market. You can imagine you are there and someone sat in a café next you and you can smell what they're eating."

The impact of heat sensitivities had a much stronger impact on presence. Nearly all participants responded positively to the element of heat being added to the environment. They all spoke about the "expectation" of the environment being hot. A crowded market place in a country like Hong Kong is expected to be hot and crowded so there is the feeling that it is necessary to experience the heat if there is to be a sense of presence. A cold room would not create the right conditions for presence in the environment to be achieved. Participants spoke of the "expectation that it is hot" and the "passive heat all around you". They said, "it just makes you feel like you're there and your body responds to it really well as if you're there". With the heat increasing throughout the experience, it felt more real to participants:

"The heat once got almost a bit too hot but that's what would happen in that situation. It added to it massively."

With Lombard and Ditton defining presence as being when the mind forgets the elements of technology, it can be argued that when actions in the virtual world are mirrored in the real world, that sense of presence is achieved. Through adding in heat, participants responded in the manner in which they would if they were in the Chungking Mansions. One said, "I felt like I wanted to take my jacket off because I thought I was in a different country so why would I have my jacket on?". This was further drawn out and discovered during questions focusing on interactivity. Through adding in heat and smells, one participant described it as "the film really responds to you".

One participant noted that they didn't feel like they could interact in the environment but that wasn't down to a lack of immersion. Instead they stated that they wouldn't choose to interact with people in this environment in the real world. Instead they would walk through and observe but not try and connect. This again suggests that moment of presence where their behaviour was the same in both environments.

Half of participants spoke about virtual embodiment and how the added senses can create this extended level of immersion adding to the impact of presence. This was pointed to as being a result of the senses.

"There was definitely more of a sense of embodiment...because your senses are reactive to what is around you and visually as well you can see the same thing as last week but because you can smell and feel different things you feel like you are much more of a part of it."

The heat also enhanced this from other participants. The environment was set-up with a heater in one area of the tent which blasted the air in in one position. Although it was noted that it would be better to have the air circulating in different areas, for the majority of participants it was either seen as anything worth noting, or the air created the feeling of movement helping the case for virtual embodiment.

"It felt like you were moving round and passing you and you did feel more embodied in the space in that way."

This study focused on enhancing presence through multi-modalities work, but it also seemed to play a role in the interactivity of the environment.

"With my senses being alert I looked into a lot more detail about what was going on.

Whether that's with the second time watching it or because my body was responding in a different way. I was looking at more finer details. I was looking at where the smell could be

coming from.”

Some ambiguities were identified during the interviews. In the first viewing, one participant reported moments of motion sickness, which is accentuated in this film due to the high level tracking shots meaning a disconnect between the body and mind. Although a common concern within virtual reality (Ohyama et al., 2007), technologies and established filming conventions for 360-degree film are helping to remove this problem. However, in this film specifically, it was designed to create that sense of uneasiness to replicate the experience of being in the environment and so tracking shots and flash frame sequences were used to add distortion. Only one participant reported motion sickness. In the second week, the participant didn't suffer, as reported:

“I didn't seem to experience it at all. I don't know if that is that it's not just your eyes telling you are in a different place and moving but the hot air the smell and the whole ambiance of it all.”

Further studies on this are needed. This data suggests that by adding in different senses, it can enhance the trickery of your mind that you are in this environment and mean that it is a more authentic experience so you would expect the motion.

A common statement in the interviews focused on the issue of the sensory stimuli being added to a film that they had already watched. This was necessary to be able to measure the impact on presence but it did point to a concern. Around half of the participants spoke about the experience as being less immersive, which was suggested that an element of the narrative is lost when you have experienced it before. One participant said that they weren't as “curious” as they were when they watched it the first time. Another said, “this time I knew what I was expecting so I didn't go straight there”, signifying a drop in the level of presence. To understand better then, a number of participants watched the film for the first time with the added sensory stimuli. The responses clearly signify a more intense experience of feeling presence in the environment. A participant, who had experienced VR previously, stated;

“The sensory side of it was unbelievable so that was amazing to have the sensory side of the smell and heat which helped immerse you in it. But the movement, I actually felt like I was moving around in the environment in a more natural way than I did before so I felt like I could almost control where I was rather than just being led by the environment.”

It indicates a quicker response to feeling presence and more authenticity to being in the environment. Although there is no interactivity in the 360-degree film, where you can choose different pathways, narratives or move around in different directions. The respondent here felt like there was movement and agency in the environment given the added senses.

The senses added impact to the uneasiness that was created in the film. One scene focuses on a man who passes through the market and then spots the camera. He is curious as to what it is and comes close to the camera to investigate (fig. 1). Many respondents spoke about the uneasiness in this scene and how it made them jump or feel that their personal space has been invaded. The participant who only watched the film with the added senses described it with a lot more intensity in the language that was used.

“Once I got scared in there when a big guy came up to me and looked and for a minute I felt threatened by him and thought he was going to hit me. I actually felt ..this is how immersive it is... as I really felt he was in my space and I felt out of control totally as I thought I really don't know what he was going to do. I was really tense. I had in the back of my head that I could, if I wanted, to come out of it and take the thing of. I didn't like him and I was on the edge.”

The same scene was also discussed by other participants with the heat leading to more “agitation”. One participant said that “heat puts you on edge more” so this scene made you feel more uneasy. Another participant had a comparable experience,

“Generally the heat itself makes you feel more uncomfortable in there so it adds to the

element of people coming closer to you. Your mind tricks you into thinking it's the heat coming off him, rather than the general heat in the area adding to the uncomfortability (sic.)."

However, there were moments when the suspension of disbelief and sense of presence were reduced. Paradoxically, it was in the above example. One respondent was so scared that they tried to push the person away but, clearly could not. As they put it: "It goes against the laws of physics" not being able to touch the person and, at that point, the overwhelming sense of presence disappeared.

From this we can deduce that specific ideas that are being explored in the film, in this case the sense of uneasiness in the virtual environment, can be heightened and accentuated through adding in multisensory modes at specific intervals in the 360-degree film.

## Conclusion

The added sensory stimuli to 360-degree film enhances the level of presence in a virtual environment, bringing us closer to the sense of total immersion that has been significant within CGI virtual environments. Heat and olfactory additions create a more immersive experience within 360-degree film and create the sense of interaction and embodiment that has been lacking within simple spherical film. To create virtual worlds that allow the user to suspend disbelief, 360-degree films need to work that bit harder and utilise the opportunities that multimodalities bring to enhance presence in the virtual environment.

However, our research also suggests that any answer needs to be a little more nuanced around three main areas and that further research needs to be carried out in all of these areas to fully determine the extent to which it does:

- The experience of viewing 360-degree film is profoundly different to traditional forms of screen-based media: it is experiencing rather than viewing. As a result, it is argued that traditional terms for the users of such films - such as audience or viewer – is replaced with a new term: 'experiencer'. From this research, it is clear that the experience of 360-degree film is enhanced by the addition of multi-sensory input and, from this very small study, would argue that there is a hierarchy of affect: visual, auditory, thermoceptive and olfactory, in that order. Further studies might explore this and the extent that other forms of sensory input, such as the "movement and haptic sensations" that Ryan advocates, might have on the experience.
- 2 The spaces that multi-modality need to be experienced in have to be relatively sophisticated to enhance the sense of presence fully. There are numerous current examples of '4D' film where, in a stable and controlled environment, such as a theme park, multi-sensory input is added to the experience. This research suggests that the addition of stimuli needs to be carefully controlled for it to achieve maximum effect. Although respondents mentioned that heat could be a constant in relation to our film, they all mentioned that olfactory stimuli needed to be appropriate to the narrative and to be variable in intensity. Currently, such sophistication and expense precludes true multi-modality from happening in a domestic setting which has profound implications for who is able to access it, when and how and, more importantly, who is excluded from it.
- 3 That new means of experiencing might involve technologies that both enhance the sense of presence while, paradoxically limiting it: for example, the use of helmets. The VR experience relies on a complex set of circumstances being just right. If one, such as the fit of the HMD, is not, the experience is diminished to the extent where disbelief cannot be suspended. This also applies to the addition of other sensory input.

## References

- Bailenson, J. N., Blascovich, J., Beall, A. C., & Loomis, J. M. (2001). Equilibrium theory revisited: Mutual gaze and personal space in virtual environments. *Presence*, 10(6), 583-598
- Banakou, D., Groten, R., and Slater, M. (2013). Illusory ownership of a virtual child body causes overestimation of object sizes and implicit attitude changes. *Proc. Natl. Acad. Sci. U.S.A.* 110, 12846–12851. doi: 10.1073/pnas.1306779110
- Bergstrom, I., Kilteni, K., & Slater, M. (2016). First-Person Perspective Virtual Body Posture Influences Stress: A Virtual Reality Body Ownership Study. 11(2), PLoS ONE. Feb 1, 2016, Vol.11(2).
- Bouko, C., and Slater, M.. (2011) Identity, otherness and the virtual double. *Technoetic Arts*. 9.1: 17-30
- Debord G (1996) Theory of the dérive, In Andreotti, L., & Costa, X. (1996). *Theory of the dérive and other Situationist writings on the city*. Museu d'art contemporani de Barcelona.
- De la Peña, N., Weil, P., Llobera, J., Giannopoulos, E., Pomés, A., Spanlang, B., Friedman, D., Sanchez-Vives, M., and Slater, M. (2010). Immersive journalism: immersive virtual reality for the first-person experience of news. *Presence: Teleoperators and Virtual Environments* 19 (4) : 291-301
- Dinh, H. Q., Walker, N., Hodges, L. F., Song, C., & Kobayashi, A. (1999, March). Evaluating the importance of multi-sensory input on memory and the sense of presence in virtual environments. *Virtual Reality, 1999. Proceedings., IEEE*, 222-228
- Dolan, D. and Perets, M. (2016). Redefining the Axiom of Story: The VR and 360 Video Complex <https://medium.com/@devon.michael/redefining-the-axiom-of-story-the-vr-and-360-video-complex-bee3c20d69df#94ngicddg> (accessed 13.12.2016)
- Featherstone, M., and Burrows, R. (Eds.) *Cyberspace/cyberbodies/cyberpunk: Cultures of technological embodiment*. (Vol. 43). Sage.
- Friedman, D., Pizarro, R., Or-Berkers, K., Neyret, S., Pan, X., & Slater, M. (2014). A method for generating an illusion of backwards time travel using immersive virtual reality-an exploratory study. *Frontiers in Psychology*, 5, 943
- Fuchs, P. and Moreau, G. (2006). 'Introduction à la réalité virtuelle/Introduction to Virtual Reality', in Philippe Fuchs et al. (Eds), *Le Traité de la réalité virtuelle. Volume 2: L'interfaçage, l'immersion et l'interaction en environnement virtuel/The Treatise of Virtual Reality. Volume 2: Interfacing, immersion and interaction in virtual environment*, Paris : ENSMP Presses, pp. 3–30
- Hall, E. T. (1963). "A system for the notation of proxemic behavior." *American Anthropologist*. 65(5), 1003-1026
- Heilig, M. (1998). Beginnings: Sensorama and the Telesphere Mask. In Dodsworth, C. (Ed.) *Digital Illusion*. pp. 343-351, ACM Press, New York.
- Höijer, B. (2004). The Discourse of Global Compassion: The Audience and Media Reporting of Human Suffering. *Media, Culture & Society*, 26:513-531
- Hsu, E., Li, Y., Bayram, J., Levinson, D., Yang, S., & Monahan, C. (2013). State of virtual reality based disaster preparedness and response training. *PLoS Currents*, 5, PLoS currents, 2013, Vol.5.
- Huang, H., Ulrich R. and Liaw, S. (2010). Investigating learners' attitudes toward virtual reality learning environments: Based on a constructivist approach. *Computers & Education* 55.3. 1171-1182
- Ischer, M., Baron, N., Mermoud, C., Cayeux, I., Porcherot, C., Sander, D., & Delplanque, S. (2014). How incorporation of scents could enhance immersive virtual experiences. *Frontiers in Psychology*, 5, 736
- Jones, S. (2016) Disrupting the Narrative: Immersive Journalism in Virtual Reality, *Journal of Media Practice (forthcoming)*
- Lombard, M., and Ditton, T. (1997). At the Heart of It All: The Concept of Presence. *Journal of Computer-Mediated Communication*. 3: 0. doi:10.1111/j.1083-6101.1997.tb00072.x
- Mathews, G. (2011). *Ghetto at the Center of the World: Chungking Mansions*, Hong Kong University of Chicago Press
- Milk, C. (2015). "[How virtual reality can create the ultimate empathy machine](#)". Talk given at Ted2015. March.
- Munyan, B.G., Neer, S.M., Beidel, D.C., Jentsch F. (2006) Olfactory Stimuli Increase Presence in Virtual Environments, In Scavone C (Ed). *PLoS ONE*. 11(6):e0157568. doi:10.1371/journal.pone.0157568
- Nikunen, K. (2016). Media, passion and humanitarian reality television. *European Journal of Cultural Studies*, 19(3), 265-282

- Otto, P. (2007). Between the Virtual and the Actual: Robert Barker's Panorama of London and the Multiplication of the Real in late eighteenth-century London. *Romanticism on the Net*: 46
- Ohyama, N., Watanabe, M., Akizuki, T., & Harada, T. (2007). Autonomic responses during motion sickness induced by virtual reality. *Auris Nasus Larynx*, 34(3), 303-306
- Pimentel, K. and Texeira, K. (1993) *Virtual Reality: Through the New Looking-Glass*. Intel/Windcrest McGraw Hill.
- Reiner, M. (2011). Presence: Brain, virtual reality and robots. *Brain research bulletin* 85.5. 243-244
- Ryan, M. L. (1997). Interactive drama: Narrativity in a highly interactive environment. *Modern Fiction Studies*. Vol. 43, no. 3. 677-707
- Ryan, M. L. (2015). *Narrative as Virtual Reality 2: Revisiting Immersion and Interactivity in Literature and Electronic Media*. JHU Press.
- Smith, W. (2015). Stop calling Google's Cardboard 360-degree videos VR <https://www.wired.com/2015/11/360-video-isnt-virtual-reality/> (accessed 18.12.2016).
- Uricchio, W. (2011). A 'proper point of view': The panorama and some of its early media iterations. *Early Popular Visual Culture*, 9(3), 225-238
- Wilcox, L., Allison, R., Elfassy, S., & Grelik, C. (2006). Personal space in virtual reality. *ACM Transactions on Applied Perception (TAP)*, 3(4), 412-428



## Appendix 6

Jones, S. 2017. The Town that Blew Away. (Film). Aesthetica Film Festival. Tacoma Film Festival.

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## Appendix 7

Jones, S. and Dawkins, S. 2017. Shameful Conquest. (Film) Dublin Web Fest.

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